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THE CLASSIFICATION OF DEAF CHILDREN.*

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I OFFER no apology for introducing this much-discussed subject, for in your resolutions for conference you have one which bears directly upon the classification of deaf children, and which if passed would tend greatly to enhance the efficiency of deaf education. I do feel, however, that the task should have been better placed in other and more able hands.

The proper classification of the deaf is the basis of efficient education, and I should think that few, if any, rational educationists would now have the hardihood—I might almost say, the thickheadedness—to lump all sorts and conditions of deaf children into one class and to teach them by one system. So painful a method would be neither scientific nor humane. By rational classification, combined with early education, alone can be obtained the best results, and these must be the guiding methods of the future, for they will bring out *individuality*, and if deaf education is to be efficient, it must make the study of the individual child its first consideration,

* Read before the Conference of the National Association of Teachers of the Deaf at Manchester, July the 26th, 1911.

with the view to adapting to each child the system best suited to his needs and calculated to develop his faculties to best advantage.

Those of you who know my opinions are aware that I take a much wider view of the deaf child than falls within the definition of the Act of 1893. I would make any system of classification include not only the normal totally deaf and semi-deaf, the blind and mentally defective deaf, but also the child who is hard of hearing and the child who is very slightly deaf. In a word I would make it embrace every defect of hearing from the scholar who can be taught perfectly well in an ordinary hearing school to the mentally defective deaf-mute who requires the most highly specialised teaching in an institution. Deafness is a physical defect which is one of the most serious that can befall us, and it has been terribly neglected until comparatively recently. If my suggestion were carried out universally, deafness would of necessity receive more attention, and many cases would be cured or at any rate prevented from progressing further. It is not that the doctor "has failed in his duty to the deaf," as Mr. Payne has publicly asserted, but that he has not yet had sufficient chance to exert his powers for the prevention of deafness in its early stages.

I need not go into the details of my suggestions as to classification, as they have been published in full already. I must, however, repeat the scheme in outline, and I am anxious that it should be discussed very fully. It includes every child who shows any sign of loss of hearing, be it ever so great or ever so small. It is based primarily upon school medical inspection, and classifies the deaf into four groups—the slightly deaf, the semi-deaf, the very deaf, and the defective deaf. Between these four groups there is no absolute line of demarcation; they shade one into another. In the very deaf class must be included normal deaf-mutes and those with residual hearing (vowel hearing or for very loud speech close to). The semi-deaf should comprise those who are possessed of a greater degree of hearing, sufficient to give them a certain amount of residual or natural speech. The slightly deaf can be divided further into two groups of "very slightly deaf" and "hard of hearing." The educational methods necessary to the efficient teaching of the four primary divisions range from the various deaf schools and institutions to the ordinary hearing classes of the elementary school. I have suggested that for practical purposes of efficient teaching the slightly deaf should be subdivided into the very slightly deaf who can hear whispered speech at from three to six feet, and the hard of hearing whose acuity is less than three

feet, their defect being not so marked as that of the next class. The very slightly deaf can be taught in a hearing class, individuals who require it being placed in the front desks. For the hard of hearing, I would establish special classes in addition to the ordinary hearing school curriculum, these classes being held in hearing schools and in charge of visiting teachers of the deaf.

Taking next the semi-deaf, with whom I would class those who cannot hear the whisper, and whose acuity for spoken speech is four feet or less, a comparatively considerable amount of residual hearing when contrasted with the deaf-mute. Those who have only vowel hearing or hearing for very loud speech close to are not included. The range of hearing in these cases will be wide and the factor of mentality will be of great importance. The children included in this class will fall, therefore, into two groups—the better cases and the worse cases. The former, scholars of good mentality, fair residual hearing, and natural or residual speech, would be educated best as permanent units of special classes under teachers of the deaf, and probably it would be better that they should not be permitted to mix with the very deaf, and that precautions should be taken to prevent them from sign contamination.

The worse cases, with more marked degree of deafness, of doubtful mentality, or with defects of speech, are on the borderland between the better cases of the semi-deaf and the very deaf; with them, as with the very deaf, no modification of ordinary school methods is possible. They require education in a special school for the deaf, *the study of each individual child being of paramount importance*. The extremist in oralism will want to educate them all on the oral system, the fanatic in signs will try to reduce them to a painful, dead level of signing—condemned to perpetual dumbness, a class apart from their fellow-creatures. Both are wrong, both are to be condemned, although the extreme oralist is entitled to sympathy because he wishes to raise the deaf child to speech, whilst the extreme advocate of signs, and nothing but signs, would condemn him to everlasting dumbness. It is *the child* who must be studied, not the system, and as long as I live it will be my endeavour to insist upon this, to preach it, not with the same eloquence as my colleague, Dr. Kerr Love, nor with his unrivalled experience, but certainly with equal sincerity and ardour. If the child shows progress under the oral system, then push him along that line heart and soul, and protect him from every influence that may run him off its rails. If he is a failure at oralism, the sooner it is acknowledged the better, so that he can be educated upon some other system. Perhaps his case may

lie between the two, then take advantage of both systems. It is not for the system to take advantage for the child, but for the child to profit by the system. I might even go a little further and say that the child must profit by the school and not the school make a profit out of the child. The educationist exists for the child, although some appear to think that children were specially created for their emolument and advantage, and since the educationist exists for the child he must study the child and adapt himself to the child. This is so throughout the whole educational system. We set out to educate the child and immediately are confronted with the fact that he must be classified. After much groping through dark ages, when the birch took the place of classification, the child was roughly classed into normal, physically defective and mentally defective. Then the second category had to be further subdivided into crippled, blind, and deaf, whilst the mentally defectives were grouped as uneducable idiots and imbeciles and educable mentally deficients. We pass from the general educationist and come to the educationist who is specially concerned with the deaf. No sooner has he started upon his work than he is, in his turn, confronted with the necessity for classification, without which he can make no real progress in the work he has to do. And all this, gentlemen, which you may think to be an unnecessary digression, shows how the individual child must be studied, and how success hangs upon that study before it hangs upon some particular system.

But to return to the classification I suggest; under present conditions, the worst cases of the semi-deaf must be taught with the very deaf. It is likely that it may be found possible later to classify both classes and re-arrange the educational methods applied to them to better advantage. If the very deaf and the worse cases of the semi-deaf fail under the oral method (which, without being an extremist, I take to be the ideal method), they must not be allowed to influence the oral successes. It is here that classification is of greatest importance, and it is here that the study of the individual child reaches its greatest value. Once experience has proved that a scholar, after thorough and careful trial, will never attain to speech, I might almost say *useful* speech, he should be transferred to another system as soon as the fact is recognised beyond a reasonable doubt. It is with a view to the recognition and elimination of obstacles to the child's best progress that careful scientific classification is of so great importance.

With the very deaf (and also with the worse cases of the semi-

deaf) careful and close study of individual mental capacity is of first importance. Every child must be classified for educational purposes, so that his teacher may get the best out of him. I believe this would be easier if we could have a preparatory school, something like that at Fredericia, in Denmark, but one to which the children came at an earlier age than is at present compulsory. The slightly dull child who may be left hopelessly behind in a class of deaf scholars of normal mentality may appear comparatively bright in one of the mentally defective deaf because he is *unioculus inter cæcos*, and he is not receiving his full educational rights if he is placed in either class.

The very deaf ("deaf-mute") child is one whose deafness is total or whose residual hearing is of so slight a nature as to constitute a negligeable quantity so far as education is concerned. The normal very deaf child is probably better in a day school, provided his parents feel their responsibilities sufficiently to help in his education at home. One of the greatest troubles in our modern educational methods is the control of the home and its surroundings. This has been well indicated in the paper which you have heard from my colleague Dr. Kerr Love. The home surroundings are of enormous importance in the education of the deaf and influence classification in no small degree. It is no use grading a child for work if his attendance is irregular and his home surroundings are morally and physically bad. This is a matter which merits discussion at your hands and upon which I should like to hear put forward some resolution.

The very deaf may be subdivided into oral successes and oral failures, and either of these might be further graded according to mentality. As with the worse cases of the semi-deaf, there will be certain borderland cases who may be educated partly by one system, partly by another. Both groups require special education, both require careful classification, especially those who have failed under the oral system. It is only by study of the individual child that the causes of failure can be ascertained. The oral successes must be kept rigidly to the oral method, the failures require to be segregated and trained by other systems. As I have just said, borderland cases will occur, and it is obvious to the physiological educationist that even a small proportion of speech is a precious possession not to be lightly withheld. It is not a question of what special system is the best to follow but of what system or combination of systems is best for the individual child. It is essential that this should be kept clearly in view by everyone who has the welfare of the deaf child at heart. It would be of advantage if the

words "Remember the Deaf Child" were prominently displayed in every deaf class room.

I have placed in a class by himself the defective deaf child, one to whose auditory incapacity is added the infirmity of blindness or of mental deficiency. These children require very special instruction under teachers of high capacity and experience. I need not stop to discuss this group of scholars here, but I would like to applaud the humanity of the third of your resolutions for conference. The segregation of the feeble-minded deaf and their permanent care would be a very great step forward. It is humane and it tends to betterment of the race. It is one of the most progressive and eugenic resolutions yet put forward by any body of educationists, and it has my warmest support.

Now the system of classification which I have suggested in this paper is somewhat elaborate, and I am prepared to hear that it is not practicable, save in large cities. My experience of deaf education has been obtained in London, and I believe that classification of a reasonably elaborate nature is quite possible in a vast city like London. It is largely a matter of organisation. The schools we have could be utilised, and given efficient school medical inspection I cannot see why every deaf child in London could not be detected and classified for education. By my system a certain number would be educated away from the deaf schools, a percentage of them being under instruction by teachers of the deaf. Some of these children now attend deaf schools and ought not to be there; they occupy places that should be occupied by pupils more fitted for a deaf centre and who are thus made, maybe, to lose precious time.

But what of small cities and towns, what of country districts, and what of large institutions? Some modification of the suggestions contained in this paper is necessary, and I do not see why such modification could not be made, so that efficient classification, providing for every grade of deaf child, should not come within the range of practical politics. I leave the matter to your discussion and I do not doubt that, having the welfare of the deaf child at heart and being possessed of great experience, you will arrive at a satisfactory solution.

DISEASE IN HOMOGENEOUS TWINS.

By E. A. Cockayne, M.B., M.R.C.P.

The physiological and psychological likenesses between pairs of twins developed from a single ovum have often been made use of by writers of fiction, and have been carefully investigated by Galton, who gives some most interesting examples of both in his book 'Inquiries into the Human Faculty and its Development.' The resemblances have been found to extend to various pathological manifestations of body and mind. Of the former the most obvious are errors of development, which have been discussed by Ahlfeld, and more recently by Windle, who state that they are not so common as Ahlfeld has suggested. In spite of their permanent and striking character he has only been able to collect records of nineteen cases, and to these I have added three more. Of diseases occurring simultaneously in twins I can find few recorded instances, but have recently met with the following example:

Two boys, aged 13 years, remarkably alike in face and figure, are homogeneous twins, as is proved by the mother's statement that there was only one placenta. Though both are quick and excitable in disposition they have shown no definite nervous trouble in the past, and there is no history of nervous disease in the family. Until seven months ago, at the age of twelve, they were quite healthy. Then both began to suffer from lienteric diarrhœa, which became worse, and had continued up till three months ago, when I first saw them. On many days they used to pass a loose motion soon after every meal, even when they had only eaten a piece of bread and butter, and in addition, often had diffuse abdominal pain, which was relieved after the bowels had acted.

On some days the diarrhœa was less troublesome, but was never entirely absent. In spite of their voracious appetites they had steadily lost flesh, and weighed respectively 4 st. 2¼ lb. and 4 st. 4¼ lb.

The smaller fluctuations in the severity of the symptoms have not always corresponded very closely in the two boys, but the general course of their illness has been the same. Their condition has shown a parallel improvement under treatment, and for some time past they have had no pain, the diarrhœa has ceased, and they have begun to increase in weight.

The treatment consisted in giving them easily digestible food, in making them eat slowly and in moderate amount, and in insisting that they should lie down for half-an-hour after each meal.

The medicinal treatment, to which little importance was attached, was different in the two cases. To one potassium bromide and tincture of belladonna was given, to the other aromatic chalk powder and tincture of catechu. Apparently these drugs had no influence on the course of the disease, or if they had any effect it was equal in both.

The only other undoubted instance of a functional neurosis in homogeneous twins is the case mentioned by Trousseau of two brothers, physically much alike, who invariably suffered from asthma when at Marseilles, but were always free from it at Toulon. Both also suffered from rheumatic ophthalmia (ophthalmie rhumatismale) at the same time, even when they were staying in different places. Trousseau states that he has met with other similar cases in his practice.

Gould and Pyle quote a case of Marshall Hall, which I have been unable to trace to its original source, of male twins nine and a half months old, who became simultaneously affected with restlessness, whooping and crowing in breathing, and three weeks later had simultaneous convulsions.

Clifford Gill gives a case in which twins had headache and biliousness at the same hour, though one was at York and the other at Scarborough. The one said at the time of her attack that her sister was suffering in the same way and this proved to have been the case. In later years these sisters became insane at the same time.

Kleinwächter gives examples of congenital disease of infective nature such as variola and syphilis occurring in twins of this type, and the case described by Anseaux of twin brothers, much alike in appearance, who were born with goitres alike in size, may fall into this group. The specific fevers are naturally very liable to attack twins at the same time, but Galton has proved that they are much more likely to attack homogeneous twins at the same time and that the diseases are more apt to run a precisely similar course in them than in heterogeneous twins or ordinary brothers and sisters. This was noticed in no less than nine out of thirty-five cases. He gives an example where this occurred successively in whooping-cough, chicken-pox, measles, and a feverish attack of uncertain nature. These twins also had bilious attacks at the same time. The true cause of this phenomenon is doubtless that the susceptibility to and the power of combating the infecting organism is inherited in like degree by both children.

Marandon de Montyel describes in detail a most interesting case

of female twins which demonstrates the inheritance of this kind of susceptibility. They bore a great physical and mental resemblance, walked and talked at the same age, and began to menstruate on the same day. They had the following illnesses identical and simultaneous in each instance: colds, intestinal trouble, measles, mumps, and a very mild attack of chicken pox. After they had married and were living in different places, they became pregnant at the same time, and in the fourth month of pregnancy each had a sudden and apparently causeless attack of acute mania with identical religious and erotic hallucinations. Their children, boys, were born within forty-eight hours of one another, and after this the twins rapidly improved, and in less than a month were cured.

An instance of chronic infective disease in twins is that given by Worcester, of male twins who were mentally deficient from birth, and after becoming insane were found to be suffering from phthisis, the one in November and the other in December of the same year, and who died of the disease within a few months of one another. Galton's case of twins in a Government office who died of Bright's disease at an interval of seven months probably shows that they had an equal degree of susceptibility to the same toxin. The Laustand brothers are often quoted as an example of twins who always had diseases at the same time, but beyond the fact that they developed cataract of the lens together, the character of their illnesses is not described.

Probably these cases are more common than their infrequent mention in medical literature suggests.

More attention has been paid to mental disease in twins. Soukhanoff, in 1900, gives a short analysis of the thirty-three cases of insanity in twins (*folie gémellaire*) recorded up to that date, with a bibliography, and I have given references to four recorded more recently.

In two cases the twins were clearly of the heterogeneous type, and in a few of the others it is doubtful to which class they belonged. The list includes many forms of insanity; in some cases there was congenital mental defect, in one case accompanied by slight enlargement of the thyroid gland and in another associated with microcephaly, in others it appeared later in life. There is one case of dementia præcox and one of general paralysis, which appeared in twin brothers at the age of thirty-seven, and of which they died within three months of one another. In most cases the twins were of the uniovular type, alike in appearance and mental character, and the form of the insanity in each pair was the same.

The onset and course of the disease with its simultaneous remissions or exacerbations and the delusions and hallucinations, when they were present, were alike in both, and in some suicidal or homicidal impulses occurred at the same time in both.

In two cases where the first appearance of the disease was separated by some years, the environment and life-history of the affected twins had been very different, but the insanity conformed to the same type in each when it did appear.

In some there was a definite history of insanity in one or both parents, or in a close relative, in others none. But its absence does not make it improbable that the disease was inherited, especially in view of the results of recent work by Cannon and Rosanoff in the Eugenics Record Office in America, which supports the view that some forms of insanity follow the Mendelian Law of Heredity, as has been proved already in the case of some family diseases and deformities. In fact much of the interest and importance of a study of the bond between twins in health and their morbid sympathy in disease is due to the light thrown by it on the extent to which the various physiological and pathological processes of mind and body depend on inborn factors, though in many instances an additional external factor is necessary to bring it to notice.

Bibliography.

(1) Ahlfeld.—'Die Missbildungen des Menschen,' Leipzig, 1880.
(2) Anseaux.—'Journ. de Méd., Chir., Pharm., etc.,' Paris, 1807, xiv, p. 262.
(3) Ball.—'L'Encéphale,' 1884, ix, p. 885.
(4) Bramwell, B.—'Clin. Studies,' Edinburgh, 1907, v, p. 148.
(5) Bulloch, W.—'Treasury of Human Inheritance,' London, 1909, Parts i and ii, Section V*a*.
(6) Cannon and Rosanoff.—Eugenics Record Office, Bull. i.
(7) Carbonell.—'Bull. Soc. Anat. de Paris,' 1865, 2 sér., x, p. 377.
(8) Cullerre, A.—'Arch. de Neurol.,' 1901, 2 sér., xi, p. 97.
(9) Davies, E. T. H.—'Lancet,' 1908, i, p. 1481.
(10) Drinkwater, H.—'Brit. Med. Journ.,' 1909, i, p. 88.
(11) Galton, S. V. F.—'Fraser's Magazine,' 1875, p. 567; 'Inquires into the Human Faculty and its Development,' London, 1883; 'Journ. Anthropol. Instit.,' 1875–6, v, p. 391.
(12) Garrod, A. E.—'Inborn Errors of Metabolism,' London, 1909.
(13) Gill, Clifford.—'Journ. Mental Sci.,' 1883, xxviii, p. 540.
14) Gould and Pyle.—'Anomalies and Curiosities of Medicine,' London, 1897, p. 887.
(15) Herfeldt, A.—'Allgem. Zeitschr. f. Psychiatr.,' 1900, lvii, p. 24 (Bibliography).
(16) Hicks, J. B.—'Trans. Obst. Soc. London,' 1881, xxiii, p. 253.
(17) Kleinwächter, L.—'Die Lehre von den Zwillingen, Prag,' 1871.
(18) Laycock, T.—'Brit. and For. Med. Rev.,' London, 1844, xviii, p. 169.
(19) Marandon de Montyel.—'Arch. de Neurol.,' 1906, 2 sér., xxii, p. 241.

(20) Soukhanoff, S.—'Ann. Méd. Psychol.,' 1900, 8 sér., xii, p. 214 (Bibliography).
(21) Tissot, F.—'Arch. de Neurol.,' 1909, 5 sér., ii, p. 8.
(22) Trénel.—'Ann. Méd. Psychol.,' 1900, 8 sér., xi, p. 96.
(23) Trousseau.—'Clin. Méd. de l'Hôtel Dieu de Paris,' 1885, iii, p. 472.
(24) Windle, B. C. A.—'Journ. Anat. and Physiol.,' 1892, xxvi, p. 295.
(25) Worcester, W. L.—'Amer. Journ. Insan.,' 1890-1891, xlvii, p. 535.

A CASE OF INFANTILE SCURVY DUE TO STERILISED MILK.

By Walter R. Jordan, M.D.,
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On May the 1st, 1911, an eleven-months-old baby was brought from Walsall to the Birmingham Children's Hospital as an out-patient, with the complaint that it had never been well since birth, was wasting, and was always crying. It took but little food, and never went a whole day without vomiting. Its motions were at times relaxed, at others costive.

On examination there were found to be no abnormal signs in the chest or abdomen, the spleen, however, being just palpable. There were slight signs of rickets. There was a very marked *glossitis migrans*, and it was while this was being inspected that an assistant, catching sight of the lower gum, exclaimed "Why, it has scurvy as well." It was found that the only teeth cut were the lower central incisors, and that the gum was bluish and spongy about the left of these. In the upper jaw no teeth were erupted, but over the position of the central incisors were to be seen two large, bluish, spongy masses.

Further inquiry elicited that there had been bleeding from the mouth, and that two weeks earlier orbital ecchymosis had been observed.

The child had been fed from its birth on sterilised milk exclusively, except that for the last four months barley-water, made with Robinson's patent barley, had been added, and that in the same period it had had two tins of Savory and Moore's food. Great care had been taken to get and to keep to the sterilised milk, as it was believed to be "the best."

Put on fresh cow's milk, with citrate of soda, orange-juice and raw beef-juice, the infant began to improve at once, and by May the 15th the gums had become absolutely healthy, while there had been no

vomiting for four days. It still remains under treatment, as it has occasional attacks of intestinal catarrh.

A case of similar origin was reported in March of this year by Mr. Francis Brachi and Dr. J. Walter Carr, while some years ago the late Dr. Henry Ashby reported one, but there are few on record. I am inclined to think there might be many more if more medical men realised that feeding with sterilised milk involves the risk of scurvy, and if in all cases of infants so fed the gums were carefully inspected. Probably in busy practices and congested out-patient departments this is not the invariable rule, and so some cases are missed. In infants who have cut no teeth we lose the aid of the changes in the gums in making a diagnosis, and we have then to base that of scurvy on exceptional tenderness of limbs, with disinclination to voluntary movement, confirmed only in some cases by demonstrable sub-periosteal or other hæmorrhages. If we keep the point well in mind and are prepared to act on suspicion these extreme developments will often be prevented.

It is particularly important to bear in mind scurvy as a cause of anæmia, crying when picked up, and general malnutrition in infants at a time when the conclusions of the Tuberculosis Commission are likely to lead to a greater resort than ever by the public and the profession to the use of sterilised milk and sterilised patent foods in infant feeding.

I am not infrequently asked by professional brethren, "But what is your objection to sterilised milk?" I am glad to have an opportunity of replying by reporting this case, and of reminding them that for every marked, unmistakable case such as this there are scores of ill-defined ones with slight symptoms, needing, however, like treatment.

British Medical Association.

SECTION OF DISEASES OF CHILDREN.

Seventy-ninth Annual Meeting, held in Birmingham, July the 26th and 27th, 1911.

Diagnosis, Prognosis, and Treatment of Tuberculous Peritonitis.—Dr. H. D. Rolleston said that tuberculous peritonitis presented the following different forms and phases: (*a*) Miliary with ascites; (*b*) adhesive with caseo-purulent lymph; (*c*) fibrous adhesions leading to obstruction or

embarrassed peristalsis of the intestines. Diagnosis was most difficult in the earliest stages, especially in young babies, in whom tuberculous peritonitis was uncommon, a distended abdomen being a common result of gastro-intestinal catarrh. The condition might be latent, and only be discovered at an operation for hernia. The onset appeared to be acute in about one third of the cases, and might then suggest appendicitis or pneumococcal peritonitis, and in cases of generalised tuberculosis, enteric fever. The ascitic form of tuberculous peritonitis had to be distinguished from the ascites of cirrhosis and sarcoma and from polyorrhomenitis.

Encysted tuberculous peritonitis must be differentiated from various tumours and cysts. Enlarged glands could be distinguished from fæcal accumulations by enemas and purgatives.

The *prognosis* was good in the fibrous and ascitic forms, bad in the caseous and ulcerative cases, in mixed infections, in cases of much pyrexia, and in the presence of acute tuberculosis elsewhere. In children the prognosis was better than in adults, probably on account of the greater incidence of more extensive tuberculosis, *e.g.* of the Fallopian tubes, or of hepatic cirrhosis in adults.

Treatment was discusssed under the heading of hygiene, drugs and diet, vaccine treatment, X-rays, and surgical treatment. Dr. Rolleston's experience of vaccine treatment was inconclusive. X rays, which had been given a fair trial, did not appear to have any therapeutic value.

Operation was contra-indicated in general or widespread tuberculosis, in infants under twelve months, and in patients with signs of pulmonary tuberculosis. It was unnecessary in the fibrous and adhesive forms in the absence of intestinal obstruction, and necessary in cases of abscess formation and intestinal obstruction.

Professor G. A. Wright said that in his experience the three most constant conditions in tuberculous peritonitis were distension, pain, and the presence of a local palpable mass. Elevation of temperature existed in only a small minority of cases. The diagnosis might be very difficult, especially in acute cases, and could only be made certain by operation.

The ultimate results of laparotomy and its therapeutic value were summed up as follows:

(1) Probably not much more than half the cases would reach adult life, for a large proportion would die from some form of tuberculosis in a few years, though the immediate operative mortality was small.

(2) There was no hard and fast line between ascitic and plastic cases in regard to morbid anatomy, operative treatment or mortality.

(3) Tuberculous mesenteric glands might be safely removed, and in some cases certainly should be.

(4) The *rôle* of surgery in tuberculous peritonitis was rather to remove secondary troubles, *e.g.* intestinal obstruction, or to get rid of a collection of fluid or local masses of tubercle, than to play any great part in the prevention or cure of the disease as a whole.

General Œdema Following Gastro-enteritis in Children.—Dr. W. E. Hume (Newcastle-upon-Tyne) had seen thirteen cases in children aged from thirteen months to three years. The hands and feet were affected in each case, and in seven the œdema was universal. All showed some cyanosis of the extremities which could be removed by heat or friction. The blood examined in eight cases showed secondary anæmia. Treatment consisted in hypodermic injection of adrenalin chloride twice daily. In the two fatal

cases there was an abnormal degree of fibrosis in the supra-renals. There was no clinical or pathological evidence of heart or kidney disease. As the result of experiments in feeding he had not found that the theory of salt retention explained the condition. He thought that attention should be given to the supra-renals in subsequent examinations of these cases.

Infantilism Associated with Chronic Intestinal Nephritis.—Dr. Leonard Parsons (Birmingham) recorded a case in a girl, aged $6\frac{1}{2}$ years, whose bodily and mental development was that of a child of three years, or even younger. The clinical features were polyuria, pale urine with a trace of albumin, marked thirst and wasting. Death took place from broncho-pneumonia. At the necropsy chronic interstitial nephritis and an hypertrophied left ventricle were found. There was no history nor evidence of syphilis, but Wassermann's reaction had not been performed. Allusion was made to the similar case shown by Dr. Morley Fletcher (*vide* British Journal of Children's Diseases, 1911, viii, *p.* 211).

Chronic Pulmonary Affections of Childhood.—Dr. S. West said that chronic tuberculous lesions and hæmoptysis were very rare in children before five years of age, but a few cases of chronic tuberculous cavities in children under three years had been recorded, including a case by himself in an infant, aged 6 months. He then dealt with affections due to enlarged bronchial and mediastinal glands, which were not necessarily tuberculous, though they usually were. They might cause paroxysms of dyspnœa which could be mistaken for asthma or produce considerable pressure on the bronchus going to the lower lobe and lead to collapse and bronchiectasis. He next touched on stridor and child-crowing, and then spoke of the varieties of emphysema met with in childhood. Though rare in children, true emphysema might be found in cases which had never been the subjects of chronic bronchitis, and in such cases was the result of malnutrition. The mode of production and results of collapse of the lung, were lastly discussed.

Dr. Vogt (Strassburg) laid stress on the chronic condition of infiltration of the left, less often of the right, lobe of the lung that is not rarely left behind after broncho-pneumonia and may lead to localised bronchiectasis. He thought that pulmonary diseases caused by the influenza bacillus showed a more marked tendency to chronicity than any others. Chronic pneumonia was commoner in younger children. In twenty cases in which the beginning of the disease could be accurately determined, eighteen belonged to the first six years of life, and nine to the first two years.

Dr. J. E. H. Sawyer (Birmingham) said that chronic tuberculosis of the lungs was excessively rare in children. In an examination of 10,000 children, he had diagnosed phthisis of the adult type in only eleven.

Professor Stoeltzner (Halle) dwelt on the value of thiosinamine in chronic pneumonia and related a case in a boy, aged 7 years, who in three weeks received ten injections of fibrolysin corresponding to 2 grm. of thiosinamine. The fever vanished together with the dulness, bronchial breathing and retraction of the chest, and there was great increase in the boy's weight.

Disturbances Arising from Milk Feeding in Children after the First Year.—Dr. H. Vogt (Strassburg) said that children most likely to suffer from over-feeding with milk were subjects of the exudative diathesis, which he defined as a constitutional abnormality characterised by pronounced susceptibility of the skin and mucous membranes as shown by the

development of various eruptions and liability to respiratory and gastro-intestinal catarrh. Such children should be given a mixed diet during their first year instead of a pure milk diet, and during their second year the milk diet should be reduced to a minimum and a finely minced meat diet substituted. Rickets, like the exudative diathesis, was held by many to be an inherited constitutional diathesis, the development and severity of which were largely dependent upon the method of feeding.

Breast feeding was by no means a protection against rickets. Breast-fed children with that disease often improved and gradually recovered on a mixed diet consisting of mixtures of milk and starch solution or of soups or broths containing carbohydrates. What he had said about breast feeding applied still more to cow's milk feeding.

Another deleterious effect of excessive milk feeding was that children so treated were much more susceptible than others to infection, especially to severe and fatal attacks. An exclusive milk diet also tended to produce anæmia, as milk was extremely poor in iron. Another evil effect of milk was its tendency to cause constipation. That could be best relieved by diminishing the quantity of the milk ingested and substituting carbohydrates, of which malt extract was the best.

Ætiology of Nævi.—Mr. D. C. L. Fitzwilliams, in a paper based on the examination of 700 cases in children, came to the following conclusions: (1) Females are more frequently attacked than males. (2) Nævi are almost always present at birth, and only comparatively few appear later, spider-marks and the more deeply seated nævi being the chief exceptions to this rule. (3) Nævi most usually start on the surface and less frequently in the deeper structures. (4) Their extension and growth are intimately connected with the nerve supply of the part. In illustration of the last point the author mentioned the frequency of nævi at situations where the nerves become cutaneous, *e. g.* at the side were the lateral cutaneous nerves are given off, and near the middle line where the anterior perforating branches come to the surface. Occasionally he had seen a scattered nævus extending round the flank like herpes zoster.

Epidemiology of Poliomyelitis.—Dr. F. E. Batten, in a paper illustrated with lantern-slides and diagrams, showed: (1) That poliomyelitis is an infective disease; (2) that it is an epidemic disease; (3) that it had occurred in epidemic form in the following towns and villages in Great Britain during 1910—Carlisle, Maryport, Barrow-in-Furness, Melton Mowbray, Irthlingborough, Cerne Abbas, and Tillicoutry; (4) that to diminish its incidence cases should be isolated and treated like the infective diseases. The period of incubation was probably less than six days; the period of isolation had not yet been ascertained, but should not be less than three weeks.

Oxypathy and Uric Acid.—Professor W. Stoeltzner (Halle), after referring to his work on oxypathy (*vide* British Journal of Children's Diseases, 1911, viii, *p.* 191), discussed the relation between oxypathy and uric acid. He had found that large doses of citrate of soda in cases of severe migraine and of inveterate neuralgia in gouty adult patients yielded the same satisfactory results as in the chronic phosphoric acid poisoning in children, in whom oxypathy was as common as gout was rare.

Report on a Thousand Consecutive Cases of Scoliosis.—Mr. P. B. Roth.—843 cases were in females, 157 in males, 86 per cent. occurred between 6 and 20 years, and 65 per cent. between 6 and 15; 276 had blood relations also suffering from scoliosis. In seven families three or more members were affected. The bad position assumed in writing, a delicate constitution, and too rapid growth were responsible for a great many cases, but in 361 cases no cause was assignable. Difference in the length of the legs occurred in 19 cases only. Pain of varying degree was met with in 440 cases. Flat-foot was found in 605 cases. Attention to dress before any treatment was essential. Treatment by posture and exercise entirely arrested the increase of bony deformity in all but 5·5 per cent., and in 3·3 per cent. slightly decreased it. In 83 per cent. a permanent practical cure was obtained.

Spinal Anæsthesia in Abdominal Surgery.—Mr. H. Tyrell Gray said that the younger the child the more suitable was the case for spinal anæsthesia, especially in operations on the new-born for congenital abnormalities. It was in acute abdominal lesions that spinal anæsthesia was most often indicated in young children. The mechanical advantages of spinal anæsthesia were the complete muscular relaxation and absence of inhibition of the muscular activity of the intestines, which therefore did not protrude through the abdominal wound but remained comparatively collapsed.

Intussusception in children under two years with very few exceptions should be performed under spinal anæsthesia. In injuries to the abdominal viscera, spinal anæsthesia was often advisable owing to the frequent necessity for extensive exploration. In collapse from hæmorrhage spinal anæsthesia was usually contra-indicated because it was unlikely that the blood-pressure could be artificially maintained to a sufficient height to withstand the drop accompanying the necessary thoracic paralysis before the hæmorrhage had been stopped.

Treatment and Prevention of Measles.—Dr. R. Milne described his method, which consisted in swabbing the throat with a 2 per cent. solution of carbolic oil every two hours for twenty-four hours and in inunction of the skin with eucalyptus oil morning and evening for four days, and once a day for the six days following. By this means he claimed that infection could be prevented and complications avoided.

Modifications and Extensions of Owen's Operation for Hare-lip.—Mr. F. W. Goyder (Bradford) described his method by which improved cosmetic results could be obtained.

Royal Society of Medicine.

CLINICAL SECTION.

October the 13th, 1911.

Acute Encephalitis.—Dr. Wilfred Harris.—A girl, aged 13 years, was on May the 21st suddenly seized with a shivering attack, followed by severe headache, vomiting, and pyrexia. She became delirious and uncon-

scious the next day, and did not speak again for thirteen weeks. During this time she was very restless and noisy. At first she had no control over her sphincters, and later, though there was not complete incontinence, it was very difficult to keep her clean. She took her food well, but would not feed herself or help herself in any way. Kernig's sign was absent. The knee-jerks, plantar and pupil reflexes were normal. No head-retraction. Optic discs normal. Except at the onset her temperature was not raised throughout her illness. Lumbar puncture on July the 25th showed a normal cerebro-spinal fluid.

On August the 20th she first took notice of her surroundings and began to smile and speak. A few days later she was able to answer questions intelligently though in a high-pitched and squeaky voice, which has since improved though it is not yet quite normal. At the present time all her movements are extremely ataxic, and she is unable to stand or walk without support, although she has fair muscular power in her limbs. She has never had any nystagmus. Dr. Harris said that her recent condition pointed to the cerebellum as being particularly involved, but that her past history indicated a much wider area of cerebral inflammation, though the pyramidal tract seemed to have escaped. He thought that eventually there would be complete recovery.

Clinical Observations on an Epidemic of Acute Poliomyelitis in Cornwall.—Drs. Alexander Gregor and W. B. Hopper.

Second Congress of the French Paediatric Association.

Held in Paris, October the 6th and 7th, 1911.

M. Comby, *President.*

Ætiology, Pathology, and Pathological Anatomy of Little's Disease.—MM. Hutinel and Babonneix.—*Ætiology:* The principal causes of Little's diseases are (1) obstetrical anomalies—premature birth or difficult labour at term; (2) intoxications and infections during pregnancy, among which syphilis plays a prominent part. Each of these factors may act independently, but as a rule their effects are combined. *Pathogeny:* Obstetrical anomalies entail asphyxia and trauma, leading to cerebral and meningeal hæmorrhage. The same effect is produced by intoxications and infections. *Pathological anatomy:* Apart from the cases due to disease of the spinal cord cerebral lesions are always present, and only differ from those found in other varieties of diplegia by their position. In simple cases they occupy the upper part of the Rolandic areas, while in double hemiplegia they are situated in the middle part, and in pseudo-bulbar paralysis in the lower part of the same region. The changes in the pyramidal tract consist in either a slight or a marked degree of sclerosis, and are always secondary to the cerebral lesions.

Pathological physiology: The mechanism of contractures is still obscure. The intellectual troubles depend either on affection of the frontal lobes or on diffuse cerebral lesions. Convulsions must also be attributed to the latter. Choreo-athetotic movements appear to be connected with irritation of the pyramidal tract, especially at its origin.

Symptoms and Diagnosis of Little's Disease. M. Haushalter (Nancy).—The essential character of Little's disease is a spastic rigidity predominating in the lower limbs, which is either congenital or dates from the first months of life. Mastication, deglutition and phonation may be interfered with, and the motor muscles of the eye and the sphincters may be affected. The tendon reflexes are exaggerated. Other symptoms are paralysis, mental disturbance, which is of considerable prognostic importance, and trophic troubles.

Orthopædic and Surgical Treatment of Little's disease.—M. Broca said that one of the most important points in treatment was the mental state of the child, which might vary from actual idiocy for which nothing could be done to an almost normal condition, intermediate grades being met with which might in a certain degree receive benefit from treatment. In cases where delay in walking was the principal symptom orthopædic treatment was sufficient. In young children massage and passive movements should be employed, followed after a certain time by active movements. If such exercises were continued for years the mild and moderate cases could be cured. In more advanced cases orthopædic apparatus would be required. In extreme cases surgical intervention was necessary. The simplest method was to straighten the lower limbs rapidly under chloroform, but tenotomy and subcutaneous rupture of muscles appeared preferable. Transplantation of muscles and tendons followed by orthopædic movements had also been proposed. M. Broca was in doubt as to the value of Förster's operation.

M. Mauclaire mentioned a case of inherited syphilis suffering from Little's disease whom he enabled to walk by tenotomy and muscular transplantation

Treatment of Little's Disease by Massage.—M. Kovindjy said that the earlier this treatment was started the more likely it was to be successful. It not only awakened the muscular tonus of the hypotonic muscles, but also acted favourably on the child's intellectual development.

Local and General Reactions to Tuberculosis.—M. Péhu (Lyons) said that, interesting as they were, the various tuberculin methods were not rigorously specific, and that some caution was required in interpreting their results. The reactions were often positive in subjects clinically healthy. The methods, however, agreed in showing that tuberculosis, whether patent or latent, became more frequent with advancing age. Consequently the methods should be employed principally in the first four months of life; after that date their exact value would require careful examination in each individual case.

M. Lereboullet quoted the case of a positive cuti-reaction with negative post-mortem findings in a girl, aged $2\frac{1}{2}$ years. The necropsy showed a gangrenous cavity of the upper lobe of the right lung without any trace of tuberculosis.

M. Barbier said that the intra-dermo reaction was very marked in latent

tuberculosis, but often absent in grave or cachectic forms of the disease. Of sixteen cases of acute tuberculosis only six gave a positive reaction. Two babies in whom the reaction was negative presented tuberculous lesions post mortem. A negative intra-dermo reaction, therefore, did not eliminate tuberculosis.

MM. Paisseau and Tixier had made observations on 1900 cases in M. Hutinel's wards and found that the influence of intercurrent affections, especially typhoid fever and pneumonia, was shown by an abnormal frequency of negative results, by retarded reactions, and by the reactions obtained at the end of the disease being contradictory to those at the beginning. In infants negative reactions had little value, while positive reactions, without being above criticism, constituted a presumption.

M. Dufour, who had been one of the first to proclaim the value of von Pirquet's method in the new-born, had, as the result of subsequent experience, abandoned the method.

M. Marfan attributed a high value to the cuti-reaction. Out of 1600 cases he remembered only three in which he had obtained discordant results. These were two cases of athrepsia and one of rheumatism, in which, in spite of a positive reaction, he could find no trace of tuberculosis post mortem.

MM. Guinon and Comby also testified to the value of the cuti-reaction. Out of 1500 cases M. Guinon had met with only one discordant result.

Diagnosis of Tuberculosis in the Child by the Tubercle bacillus.—M. Nobécourt said that bacteriological examination or inoculation of the guinea-pig was of great assistance in the diagnosis of tuberculosis in children. Some tuberculous lesions of the skin and mucosæ, such as ulcers and warty growths, yielded numerous bacilli, while in others, such as lupus and tuberculides, the bacilli were scanty. Tuberculous ulceration of the pharynx was easy to detect, but bacterioscopy had yielded the most interesting results in latent tuberculosis of the tonsils in which tubercle bacilli were frequently found. Inoculation gave interesting results in tuberculous adenitis, acute multi-glandular abscess, glandular enlargements resembling lympho-sarcoma, and in the different forms of tuberculosis of bone. Examination for tubercle bacilli was often negative in hydrarthrosis, and it yielded no results in tuberculous rheumatism. The fluid of pleural effusion was usually tuberculous, ascitic fluid was only occasionally so. The cerebro-spinal fluid very often showed tubercle bacilli on direct examination, cultures were always positive, and inoculations were so as a rule.

Sputum from children who did not expectorate could be obtained from the pharynx, larynx, stomach or fæces, but such methods were unavailable when the lesions, as frequently happened in infancy, had not broken down. Examination of the urine was to be made as in adults. In bacillæmia, if a vein could not be punctured leeches should be employed.

Radiography and Diagnosis of Intra-articular Tuberculosis.—M. Menard said that radiography often confirmed or corrected the diagnosis of bone or joint tuberculosis by showing the seat, form and extent of the disease and its relation to the joint. The distinction between tuberculosis and other varieties of osteitis, especially syphilitic, could be facilitated by this means.

Respiratory Troubles and Radioscopy in the Tracheo-bronchial Adenopathy of Infancy.—M. d'Oelsnitz said that this condition was

characterised by the frequency and intensity of the respiratory troubles. In most of the simple cases diagnosis could be made by radioscopy, in the more complicated, especially in enlargement of the mediastinal glands, which were difficult to distinguish from an hypertrophied thymus, a careful study of the mediothoracic shadow usually settled the question.

(*Paris Médical*, 1911, ii, p. 431; *La Presse Médicale*, 1911, xix, pp. 812 and 824.)

J. D. Rolleston.

Société de Pédiatrie, Paris.

June the 20th, 1911. (*Bulletin No.* 6.)

Congenital Paroxysmal Cyanosis.—MM. Variot and Morancé showed a girl, aged 9 years, who had frequent attacks of cyanosis; during the intervals there was only slight lividity of the lips and nails. There was a loud systolic murmur to the left of the sternum at the level of the pulmonary orifice. Radioscopy and radiography showed a very small left ventricle, the right ventricle extending toward the right and the pedicle of the heart was enlarged.

Note on the Variation in the Mineral Salts of Human Milk at Different Times of the Day.—MM. Barbier and Mascré concluded that the quantity of salts did not vary in the milk during the first months, but that later their variations followed those of the albuminoid substances.

Treatment of Clubfoot by Subcutaneous Excision.—M. Savariaud showed two children operated on at the ages of six months and one year by this method.

Intussusception.—MM. Triboulet and Savariaud reported the case of a boy, aged 9 years, operated on for abdominal pain with diarrhœa of a chronic or subacute course with acute exacerbations and vomiting. The diagnosis was only made on palpating the typical tumour. There were no muco-sanguineous stools.

Spasm of the Glottis, the only Sign of Tetany.—MM. Triboulet and Harvier reported the case of a child, aged 13 months, who died of spasm of the glottis, which was the only sign of the existence of tetany and was not accompanied by any other manifestation of nervous hyperexcitability; both Trousseau's and Chvostek's signs were absent. The electrical reactions were those of tetany. The thymus was normal, weighing 10 grammes.

Laryngostomy in Cicatricial Crico-tracheal Stenosis.—M. Guisez showed two children he had operated on and whose respiration and phonation were normal. He also showed two children whom he had cured of stenosis of the œsophagus by dilatation by means of the œsophagoscope.

Anasarca in an Infant of Two Months without Renal Lesions.—MM. P. Nobécourt and Paisseau reported the case of a girl, aged 2 months, brought to the hospital with general œdema which did not yield to treatment. The autopsy showed the kidneys absolutely normal, but the liver was fatty to a marked degree.

Pneumococcal Abscess of One Lung.—M. Guinon showed a specimen from a boy, aged 4½ years, admitted in a condition of collapse, with cough and discharge from one ear. The right chest was dull on percussion, and there was tubular breathing with coarse râles. Abscesses were found strictly limited to the upper lobe of the right lung. The pus contained Gram-positive diplococci.

Combined Tuberculous and Meningococcic Meningitis.—MM. L. Guinon and H. Grenet reported the case of a girl, aged 8 years, whose illness developed like a cerebro-spinal meningitis and the diagnosis of tubercle was only made at the autopsy. The variations in the character of the cerebro-spinal fluid were interesting, the lymphocytosis of the onset giving way to a polynucleosis.

Hypertrophy of Thymus and Tracheo-bronchial Adenopathy.—M. D'Œlsnitz reported a number of cases and showed the radiograms (which are figured in the 'Bulletin') for comparison. In normal cases the mediastinal shadow has the form of a flagon with a long neck narrowed at its middle. In hypertrophy of the thymus the shadow is widened in its upper part and disfigured owing to the suppression of the narrowed neck, but, as in normal cases, the shadow is homogeneous, the outline clear and definite. In tracheo-bronchial adenopathy the shadow at its upper part is of normal width and presents the narrowing at its middle; below the shadow is normal but deformed by the addition of superadded shadows, chiefly to the right; the homogeneity is also affected.

Three Cases of Tuberculous Rheumatism.—Dr. S. Veras, of Smyrna, reported cases aged 9, 9, and 15 years. In the first, a swelling of the fifth right metatarso-phalangeal articulation led to the diagnosis of osteo-arthritis and the joint was fixed by a silicate apparatus. This was in a short time followed by slight ankylosis necessitating massage, whereas a similar condition in the left foot ended in complete and rapid recovery without such treatment. In the second case there was swelling of one costo-sternal articulation and also over the fifth and sixth dorsal vertebræ. The latter was completely cured after only six months of fixation, and the author considered it tuberculous rheumatism of the vertebral column and not Pott's disease. The cuti-reaction was positive in this case. In the third case there was pain suggestive of coxalgia, but cure was effected by a partial fixation for a few months, thus proving it to be a tuberculous rheumatism of the hip-joint, the time and means being insufficient to effect a cure had it been a true coxalgia.

Vincent Dickinson.

Abstracts from Current Literature.

Medicine.

Breast-feeding: The value of the test-feed (*'Lancet,'* 1911, II, *p.* 677).—**E. Pritchard, H. R. Carter,** and **W. O. Pitt** publish some very interesting figures concerning the quantities of milk taken in breast-feeding. The term "test-feed" is not here applied to a feed given in order to obtain a sample of gastric juice for analysis, but to a feed given in the ordinary way in order to ascertain the exact amount of milk obtained by the infant from the breast. This figure is reached by weighing the baby accurately before and after it is put to the breast. Special scales were employed. The account is of particular interest, as it gives us the first data from work done and published in this country. The authors compare their results with those of continental observers. By a series of tables various points are well brought out. The first gives measurements of all the feeds in twenty-four hours in a small series of private cases. Here the variations were found to be slight except in the case of the early morning feed, which was invariably the largest of any in the whole day. Table II gives the amounts of milk consumed by nurslings daily during the first ten days of life—an interesting table based upon 9435 tests in 61 cases. Table III shows in greater detail the variations for the first twenty-four days of life. Again, the average amount of milk consumed in twenty-four hours by nurslings up to the age of eight months is shown—differences occurring in the cases of sick out-patients and healthier infants in infirmaries and infant consultations. The authors find that no reliance can be placed on the quantity of milk consumed as a criterion of the progress to be expected of the infant. Remarkable progress was made in many cases where small amounts of milk were taken, and lack of progress was observed frequently where the milk supply was abundant.

REGINALD MILLER.

Infant feeding in Germany (*'Guy's Hosp. Gaz.,'* 1911, XXV, *p.* 131).—**H. C. Cameron,** writing from Finkelstein's clinic in Berlin, points out what he considers to be some fundamental differences between German and English methods of infant feeding. He says that whilst in England the proteid is regarded as the chief difficulty, in Germany it is considered the most innocuous element of milk and the most easily and completely digested. Consequently it is usual there to give for a time the so-called proteid (Eiweiss) milk—cow's milk so modified that it contains twice the amount of casein and about half the amount of fat, sugar and salts. Daily weighing is employed in the case of all artificially fed infants, and the weights are recorded upon a chart side by side with the temperature curve. Below these is a record of the amount of food which the infant has had in the twenty-four hours and its composition. The author then differentiates certain types of disorder and gives the treatment for each. By dyspepsia is meant slight digestive disturbance associated with vomiting and an increase in the number and character of the stools, which are often watery, green and slimy, but without serious loss in weight or much alteration in the temperature chart. In these cases he says it is often sufficient to omit the added sugar to the milk. In more serious cases, for twenty-four hours the infant is allowed only saccharin-sweetened water or very weak tea, followed later by diluted milk to which sugar is gradually increased daily.

By the term *Milchnährschaden* he understands the condition especially studied by Czerny and Keller. The weight curve shows a more gradual increase in weight than normal, often varying daily. The child is small, pale and feeble, and liable to infections. The temperature is approximately normal, and the stools are bulky, and grey in colour. There is no evidence of deficient absorption, but only of disturbance of balance of the calcium and magnesium salts, which are passed in excess, forming soaps with the fat in the stools. The treatment consists in diminishing the amount of fat and increasing the carbohydrates. *Carbohydrate food disturbances* (*Mehlnährschaden*) due to excess of carbohydrate are chiefly distinguishable by the retention of water in the body which results. The weight at first increases and then comes to a standstill. Hypertonus is common. The appearance resembles that of Bright's disease. There is nothing characteristic about the stools or the temperature. Treatment consists in the substitution very gradually of diluted cow's milk for a part of the carbohydrate food. In the two other forms of disturbance—*intoxication* (cholera infantum) and *decomposition* (marasmus), there is, he considers, no especial difference from English methods in the treatment except in the frequent employment of proteid-milk.

FREDERICK LANGMEAD.

The feeding of babies with undiluted citrated milk (*'Guy's Hospital Gazette,'* 1911, xxv, *p.* 154).—**H. C. Mann** gives an interesting account of his experience of the routine feeding of infants on citrated whole-milk, which he has practised for the past three years. During this period some 400 cases requiring directions in feeding have passed through his hands, and in only half a dozen instances has he been obliged to adopt any modification of the whole-milk *regime*. Such an experience is a strong testimony to the value of this method of artificial feeding, a method which, owing to its simplicity and cleanliness, is conspicuously suited to hospital practice. Dr. Mann proceeds to give the weight records in eighty-nine cases, in each of which there had been loss of weight on other diets. Throughout his work the author has made use of sodium citrate in the proportion of one grain of the drug to each ounce of undiluted milk—half the dose, that is to say, that has been employed by most who have made use of citrated milk, whether whole or diluted. In stating that he knows of "no other published series of cases in which undiluted milk has been universally employed," the author has overlooked Dr. F. S. Langmead's paper in vol. iii of the 'Proc. Roy. Soc. Med.' on "eighty consecutive cases of wasting infants fed on undiluted citrated milk" (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1910, VII, *p.* 219). Dr. Langmead, who, we believe, was the first to point out the value of citrated whole-milk in infant feeding, published his first paper in March, 1908. REGINALD MILLER.

The use of homogenised milk (*'La Clin. Infant.,'* 1911, IX, *p.* 449).—**G. Variot** and **Lavialle** state that the best method is one which fulfils the following conditions: (1) Pasteurisation of the milk and homogenisation immediately after drawing; (2) the use of aseptic apparatus; (3) the conduct of manipulations under cover; (4) sterilisation of the product at 108° for forty-five minutes in perfectly closed vessels. This process prevents the development of bacteria, oxidation, fermentations of all kinds, the production of toxins imperfectly destroyed by heating, and ensures preservation. The authors have obtained excellent results from a milk of this kind; its advantages are incontestable, and it is illogical to discard its

use for the sake of the small risk of infantile scurvy, which is easy to avoid by being careful not to prolong unduly the exclusive use of such milk and to end the period of feeding by giving ordinary sterilised milk. Such milk should be considered medicinal and used in this way. It must also be borne in mind that the cases of infantile scurvy which have undoubtedly some relation to the use of homogenised milks are very few in number when the large number of infants taking the milk is taken into account. The lasting homogeneity, the lightness of the coagulum, the syntonisation of the casein, the minute splitting up of the fat-globules, the stimulus to gastric digestion, the rapid passage through the pylorus and the excellent results obtained in thousands of weak, atrophic, hypotrophic and rachitic nurslings amply justify its employment. It should be regarded as a valuable therapeutic agent, which can in large measure take the place of human milk.

VINCENT DICKINSON.

Galactorrhœa in asymmetry of breasts (*'La Clin. Infant.,'* 1911, IX, *p.* 322).—**G. Variot**, from a series of twenty cases in wet-nurses, finds that physiological galactorrhœa, both in lacteal engorgement and after suckling, is more pronounced in the less developed breast when there is marked asymmetry of the mammary glands. This anomaly is not due to any special fluidity of milk secreted by the smaller breast, since analyses made by Lassablière tend to prove that on the contrary the milk is richer in fat and of better quality on the side where the gland is smaller. It is probable that galactorrhœa in these circumstances is due to an atony of the muscular fibres of the breast which play the part of sphincter for the orifices of the milk-channels. This muscular condition is perhaps less developed because the breast is less often stimulated by suction.

VINCENT DICKINSON.

Disturbances caused by hypoalimentation in infants (*'La Clin. Infant.,'* 1911, IX, *p.* 329).—**Mlle. E. Vigor** in her thesis describes the following degrees of intensity: (1) Hypoalimentation causing simply arrest of growth. The characteristic clinical picture was that of thin shrunken children, crying day and night, and sucking the fingers. Weight and height subnormal. (2) Arrest of growth followed by transitory gastro-intestinal disturbance, disproportion between increase of weight and height, false constipation, with scanty mucous stools, sometimes alternating with diarrhœa, dyspepsia, and vomiting which is aggravated by witholding food. (3) Hypoalimentation with continued gastro-intestinal disturbance. The diagnosis is often difficult. The vomiting persists notwithstanding the increase in food given for weeks and even for months. The body-weight, however, increases steadily, the intestinal functions are normal, and the general condition good. In such cases if the food be not increased a condition like the arthrepsy described by Parrot rapidly supervenes. If over-feeding be eliminated there is only one symptom which can vitiate the diagnosis, *i.e.* vomiting, which may be equally caused by toxicity of milk, pyloro-spasm, stenosis of the pylorus, or by excessive acrophagy and anaphylaxis. As to treatment the authoress admitted the figures of Heubner: the ration should be $\frac{1}{6}$ the weight during the first months, $\frac{1}{7}$ during the following three months, and $\frac{1}{8}$ afterwards. Weak infants require a higher ration, $\frac{1}{5}$ or even $\frac{1}{4}$ of the weight. With breast-fed infants the feeds must be weighed, and if insufficient the infant should be suckled from both breasts at each feed.

VINCENT DICKINSON.

Vomiting in infancy (*'Ann. de Méd. et Chir. Inf.,'* 1911, xv, *p.* 305).—**Périer and Gaujoux** consider this subject under two headings: (1) Vomiting in sucklings: (2) vomiting in children in the second or third year of life. In the former the vomiting may be due to hyperalimentation, hypoalimentation, and other causes as in older children. In the second category the vomiting may be associated with or without pyrexia. In the former case the vomiting may usher in one of the infectious fevers, or be due to gastric troubles, or the administration of certain drugs, as antipyrin, aspirin, etc. In vomiting, with little or no pyrexia, it is necessary to note if it is preceded or not by coughing. Vomiting in this case may be due to pertussis, dry pharyngitis, enlargement of the tracheo-bronchial glands, simple bronchitis, bronchiectasis or purulent pleurisy. Vomiting, connected neither with fever nor cough, results from irritation of the gastric mucous membrane, either by irritants, emetics, or indigestible food. The commonest cause of vomiting is due to the digestive tract, or the nervous system. The authors devote a short paragraph to hæmatemesis in infancy. This is very rare, and may be due to epistaxis, gastric, and duodenal ulcer, or so-called temporary hæmophilia, hæmorrhagic syphilis, scorbutus, and purpura.

F. R. B. Atkinson.

Estimation of chlorides in the stomach contents of infants (*'Arch., of Int. Med.,' December* 1910. *Abstr. 'Journ. A.M.A.'*).—**Wentworth** has endeavoured to discover whether or not the hydrochloric acid of the gastric juice is diminished in cases of infantile atrophy. In the first series the stomach contents were obtained one hour after eating, from a number of atrophic infants fed on mixtures of cow's milk. The results showed a diminished amount of hydrochloric acid in every case. Similar experiments with well-nourished and apparently healthy infants gave variable results. In some cases the HCl was greater and in others approximated to that found in atrophic infants. In a second series rarely more than a trace of HCl was found in the stomach contents from atrophic infants, while a diminished amount was observed in well-nourished children, the diminution corresponding closely to that found in about one half of the atrophic, but being never so extreme as that found in the other half. Examination conducted in the same atrophic infants at different periods after eating rarely showed any marked variation in the quantity of HCl present. The author does not believe that a marked diminution of HCl is an essential factor in the production of infantile atrophy. On the other hand, there is considerable evidence that it is possible for atrophic infants to gain rapidly in weight and yet produce little HCl in the gastric juice. This appears to show that the quantity of HCl in the gastric juice is not an important factor in recovery from infantile atrophy.

T. R. Whipham.

Abdominal distension in infants (*'La Clin. Inf.,'* 1911, ix, *p.* 161).—**Drs. Variot, Barret,** and **Lavialle** read a paper on this subject before the Soc. Méd. des Hôp., based on radiologic exploration and chemical analysis in cases of hypo-alimentation with aëroplagy. M. Barret has contrived a special support consisting of a wooden frame, which enables the infants to be examined in the vertical posture. The use of bismuth is unnecessary. The colon, when it contains gas, is visible in nearly every part; it has the appearance of wide, clear zones, segmented by dark lines corresponding to folds in its walls. The

presence of these clear zones allows the lower border of the liver to be clearly seen. To differentiate the stomach and colon and define their reciprocal relations it is enough to introduce a certain quantity of milk into the gastric cavity. The stomach outline then becomes visible, and, in order to follow its full extent, it is helpful to incline the infant so that the fluid is displaced along the gastric walls. By this manœuvre, practised by examining in a lateral position, the precise relations of the stomach and transverse colon can be made out. In a certain number of cases it is plain that besides the distension of the transverse colon, the tumefaction of the liver plays an important part in the formation of the barrel-shaped abdomen. In exceptional cases, in extremely atrophic infants with chronic gastro-enteritis, the whole abdomen may be transparent; not only the colon, but also the small intestines are distended with gas. The authors consider that their observations on a hundred infants prove that in the majority of cases distension of the abdomen is caused by gaseous inflation of the large intestine. In four normal infants the composition of the intestinal gas was found to be pure nitrogen; in twelve cases of distension it was nitrogen with a small quantity of oxygen; in cases with intestinal infections there was also carbonic acid and hydrogen, *i. e.* products of butyric fermentation. There seems to be no relation between the large volume of gas and the absorption of starchy foods, but the nitrogen contained in the intestinal gases may be partially derived from intestinal fermentation. The authors believe that the origin of the gas is in the air swallowed either while sucking the fingers or the teat; they have distinctly seen on the screen the stomach of an infant distended with air while sucking at an imperforate teat. It is highly probable that in aërophagic infants a certain quantity of air, at the time of evacuation of the stomach contents, passes into the small intestine, and finds its way with the chyme as far as the large intestine, where it is stored up under a certain pressure, retained on the one hand by the anal sphincter and on the other by Bauhin's valve. Not all underfed nurslings, however, are aërophagic, nor have abdominal distension; the same condition may be present in the overfed; but it would be a grave mistake to consider all infants with distended abdomens as overfed, and to treat them as such by reducing their ration of food, when in reality it should be increased.

VINCENT DICKINSON.

Affections of the suckling due to maternal causes (*'Riv. di Clin. Pediat.,'* 1910, VIII, *p.* 889).—**C. Francioni** relates the case of a boy, aged 23 days, admitted for convulsive attacks. He was born asphyxiated owing to shoulder presentation and subsequently developed intense jaundice. For the first few days he took the breast unsatisfactorily owing to the small size of the mother's nipples, but afterwards this was rectified. The first convulsive attack, tonic in character, occurred when a week old, and was unaccompanied by any digestive disturbance. A second attack occurred on the twentieth day and the third on the twenty-third. In the intervals the infant seemed well except for the icteric tint and somnolence on the days following the convulsive attacks. The urine was rather dark coloured but contained neither albumin, indican, sugar nor bile-pigment, but to the spectroscope there was a faint indication of urobilin. The fæces were normal and markedly coloured with bile-pigment. In the absence of sufficient cause for the convulsions in the child the author thoroughly investigated the mother's health, which was apparently sound. With a history of repeated abortions and premature births, and in the absence of all suspicion of syphilis, the

possibility of a chronic nephritis suggested itself. Repeated examination of the urine showed signs of renal insufficiency, in addition to which there were present cardiac hypertrophy, accentuation of the second aortic sound, hypertension of pulse and œdema of the lower limbs. As a proof of the theory that toxins were transmitted through the mother's milk, the infant did not improve until suckled by another woman.

VINCENT DICKINSON.

Nutrition neuroses in early childhood (*'Berlin. klin. Wochens.,' October* 3, 1910. *Abst. 'Journ. A.M.A.'*).—**Hochsinger** followed the development of the neurosis in five cases. The mothers were all hysterical and the surroundings were neuropathic. The children developed well during the first few months, but were constantly overfed, with the result that dyspepsia ensued. The overfeeding resulted in actual distaste for all food. Nervous anorexia is liable to develop when the child is weaned, and traces persist with a tendency to vomit readily and inability to chew solid food for many years. The only thing to do is to remove the child for a time from the home environment, and to allow food only when he is hungry. In one case, a boy, aged 7 years, vomited at every meal during the first week after removal. Having had soft foods he was unable to chew, and did not learn to do so for two months. He was still a nervous, dystrophic child and a poor eater. With neuropathic parents stress must be laid upon proper intervals between the feedings, and above all, when the child is weaned food should not be forced upon him until he is hungry. T. R. WHIPHAM.

The proper management of foundlings and neglected infants (*'Med. Record,'* 1911, 1, *p.* 283).—**H. Dwight Chapin** points out the high mortality among infants who are kept in large institutions, and says that even in hospital cases where institutional treatment is necessary, the infants should be removed at the onset of convalescence and kept under observation in their homes, or if these are unsuitable, elsewhere. In the case of foundlings and neglected infants he advocates a "boarding out" system, with a systematic plan of constant supervision by some competent authority. He proposes that the large asylums and institutions for the care of these babies be abolished and replaced by small collecting stations. These should act merely as clearing houses, where the infant's condition may be studied for a day or two, and its diet adjusted, and from which it may be boarded out in the vicinity, where it can be under constant oversight and regulation by a doctor and a nurse furnished by the station. Dr. Chapin has tested this method practically since 1902. To try and save this class of infant the Speedwell Society was formed and the children were boarded out at Morristown, N. J. The following features were emphasised: (1) Boarding out in a certain district of the country noted for its healthy conditions; (2) constant attention to diet and hygiene by the doctor and nurses, who are familiar with this class of cases and competent to deal with them; (3) the infants are kept as long as necessary, until feeding is regulated and digestion and assimilation are improved sufficiently to result in an increase in weight. The work is kept up during the whole year; (4) The training up in a given neighbourhood of a number of foster-mothers, who, by taking these infants into their homes, become fairly expert in handling them under conditions totally unlike those offered by the best institutions and far superior to them. From March 19, 1902, to January 1, 1911, 1386 children have been received, of whom 501 were under two years old. Of 241 received

under six months of age, 91 died; of 120 received between six months and one year old, 22 died; and of 140 received between the ages of one and two years, 6 died. There was only one death among 885 infants received over two years of age. It is safe to say that nearly all the younger infants would have died if kept in an institution. The infants are kept until they are essentially improved, the average stay being four months; many are kept longer. During the eight years' continuous work 70 families have been given babies to board. Some of these foster-mothers have been very successful others tire and are dropped because of inefficiency. From 15 to 20 families are usually employed, and some of the most capable foster-mothers are given two infants. Only 33 infants have been returned unimproved. The plan has proved to be economically sound as well as practically efficient. FREDERICK LANGMEAD.

Guidance and protection of children by the State (*'New York Med. Journ.,'* 1911, I, *p.* 1282).—**J. Rosenberg.**—In New York, families cannot exist on less than twelve dollars a week; several are living on six or less. In consequence, 42 per cent. of the 1,500,000 deaths are due to preventable causes; 150,000 die yearly of tuberculosis. One sixth of all American children die before they are a year old, and one fourth before they are five years old; 10,000 die from whooping-cough, and 22,000 from diphtheria. The writer regards institution life for children as unsatisfactory, and the number of children which can be adopted into good families is very limited. He recommends that colonies should be established on sites of 1000 acres, and houses built to the number of twelve per acre—in short, a garden city. The children are to be cared for by competent adults specially selected for this purpose, or by their own parents, who would live rent free. Wherever possible the money should be recovered from the parents.

CHRISTOPHER ROLLESTON.

Anterior polioencephalitis (*'New York Med. Journ.,'* 1911, I, *p.* 721).—**I. D. Steinhardt** goes very fully into this subject in a lecture delivered at Pittsfield, Mass., considering its ætiology, pathology, symptoms, diagnosis, prognosis, and treatment. The article is too long to be reviewed, and should be studied from the original by those interested in the subject.

F. R. B. ATKINSON.

Acute poliomyelitis (*'Mont. Med. Journ.,'* 1910, XXXIX, *p.* 456).—**Russel** gives the details of an epidemic which occurred in Montreal in the summer and autumn of 1909. He saw 38 cases, of which 25 were between the ages of one and five, and 8 between six and ten. The sexes were practically equal. Most of the cases came from overcrowded districts where cleanliness was uncommon. In the majority of cases there were slight prodromal symptoms, which lasted on an average little over two days before the onset of the paralysis, such as headache, general malaise, or vomiting. Convulsions occurred in only three cases. The spinal form of the disease was by far the most common; the pons and medulla were affected in three cases. In three cases the muscles never lost their reaction to the Faradic current and there was a perfect return of function in six weeks. In the majority of cases there was a marked improvement in the paralysis in the first ten days, but afterwards the improvement was much slower and depended greatly upon treatment. Many cases which were carefully treated by massage and electricity improved to a much greater extent than was expected.

J. PORTER PARKINSON.

The ætiology of epidemic poliomyelitis and its possible relation to beri-beri (*'Med Record,'* 1911, I, *p.* 1095).—**O. V. Huffman** gives a short account of various epidemics of the former disease, and draws attention to the similarity of the symptoms of acute poliomyelitis, multiple neuritis, and beri-beri. He considers that the causative factors in these three diseases may be the same, and also that the diseases themselves may be more or less identical. The writer still holds to the view now generally abandoned that beri-beri is associated with a diet of rice. F. R. B. Atkinson.

The manifestations of the acute stage of poliomyelitis in children (*'Amer. Journ. Obstet.,'* 1911, LXIII, *p.* 751).—**Le Grand Kerr.**—In all the infections of childhood the symptomatology is distinctly seasonal and varies with each particular epidemic, and especially with the type of child affected. The manifestations may by divided into three periods: the period of onset, of paralysis, and of retrogression. The symptomatology of the period of onset may present the variability of three rather distinct types: (*a*) Acute indefinite illness of two or three days' duration, with symptoms of fever, diarrhœa, vomiting, followed by paralysis with other symptoms which need no particular comment, or with a prolongation of the same symptoms for several days. (*b*) The nervous phenomena are so prominent as to make one suspicious of a cerebral rather than a spinal affection. (*c*) Onset with apparent suddenness which is probably more apparent than real. Most of these cases probably terminate fatally before an accurate diagnosis can be made, and are often reported as cases of meningitis when the real condition present is an involvement of the cervical portion of the cord. An insidious onset without any serious general manifestations is the rarest type of onset in children. It is extremely doubtful if the disease ever occurs in fœtal life. Irrespective of the weather conditions which prevail and which have no influence that can be determined, the disease is one that is somewhat strictly limited to the late summer. There has been a decided tendency in earlier epidemics to attribute the prodromal symptoms to some intercurrent disease, and to consider the onset of the paralysis as the onset of the disease. This is not so. Recent pathological work seems to prove that the first onset of widespread paralysis is due largely to œdematous pressure in the cord, and that it follows one or more days of indefinite symptoms. As the œdema subsides the paralysis is decreased, and any permanent disability in the musculature is due to the destruction of some of the nerve-ganglia. There is a preponderence of gastro-enteric symptoms in the onset of the disease. This may have suggested that the disease finds its inception in the digestive tract. But we must bear in mind that in all of the acute infections of children similar symptoms are the rule. J. Howell Evans.

A case of abortive poliomyelitis (*'Med. Record,'* 1911, II, *p.* 129).—**R. Stein** reports the recognition of one of these important cases, so difficult to diagnose in the absence of an epidemic of poliomyelitis. A child aged 6 years was taken ill in September with acute diarrhœa and drowsiness developing into unconsciousness. Opisthotonos, delirium and restlessness became marked but no paralytic or paretic symptoms appeared. The cerebrospinal fluid on the third day of illness is reported as clear and under moderate pressure. A diagnosis was made of acute dysentery and meningismus—a very rare combination. Rapid recovery ensued, the child being discharged well in a fortnight. Later the possibility of an abortive case of

poliomyelitis was considered, and six weeks after the illness, at the request of the author, Flexner subjected the patient's blood to his neutralisation test (*'Journ. Amer. Med. Assoc.,'* LXVI. *No.* 8). This showed a positive reaction, and in the absence of any previous attack of poliomyelitis it was inferred that the illness noted had been an abortive example of that infection.

REGINALD MILLER.

Transitory spinal paralysis in children (*'Riv. di Clin. Pediat.,'* 1911, IX, *p.* 564).—**A. Filè-Bonazzola** describes seven cases of infantile paralysis which lasted from a few days to a few weeks and resulted in recovery without treatment. The cases were confined to a short period, from May to August, in one year. The age of the children varied from six to twenty-one months. Four were males and three females. All the cases began with fever; in four there was acute gastric catarrh; two cases had convulsions. In all there was tenderness in the affected limbs. The duration of the paralysis was from eight to twenty-two days.

VINCENT DICKINSON.

An unusual case of infantile paralysis (*'New York Med. Journ.,'* 1911, I, *p.* 626).—**H. G. Harris** describes a doubtful case of this disease ushered in by convulsions. The case did not follow the usual course, and on the fourth day colon bacilli were found in the urine and signs of meningitis showed themselves. Hexamethylene, 2 gr. *t.i.d.* was ordered. On the sixth day tetanoid spasms appeared, and the blood count pointed to some inflammatory condition. On the ninth day lumbar puncture was performed and immediately relief was experienced. Signs of paralysis appeared on the tenth day and disappeared a week later, the child ultimately recovering. The writer suggests that the colon bacillus may cause symptoms of tetany, poliomyelitis or meningitis.

F. R. B. ATKINSON.

Herpes zoster, acute poliomyelitis, and zinc phosphide (*'Med. Record,'* 1911, I, *p.* 958).—**W. F. Waugh** finds that phosphide of zinc in doses not exceeding a centigramme for an adult one hour before meals is a certain remedy for herpes zoster, and throws out the suggestion that as zoster is a malady affecting the posterior spinal roots, the same drug might act beneficially in disease of the anterior spinal roots and should be tried in acute anterior poliomyelitis.

F. R. B. ATKINSON.

The prevention of epidemics of infantile paralysis (*'Med. Record,'* 1911, II, *p.* 259).—**M. Allen Starr** regarded it as certain that the infectious material of poliomyelitis exists in the secretions of the nose and throat of the patient, and holds it probable that it is through the inhalation of infectious particles which lodge in the mucous membranes of the throat and nose that the infection enters the system. For prophylactic measures he recommends first the strict isolation of the patient; second, the disinfection of the nasal and buccal cavities of the patient by means of sprays and gargles of Dobell's solution or a solution of boracic acid; third, the employment of similar measures in the case of all those in contact with the patient and the prophylactic administration of urotropine internally. Disinfection of the patient should be continued for at least three months. The remainder of the paper is concerned with the early diagnosis of the condition, which enables the practitioner to undertake preventive measures

for the safety of those in contact with the patient, and to administer to the patient urotropin with a view to lessening or even aborting the paralytic symptoms. REGINALD MILLER.

Epidemic infantile paralysis and its control by the State authorities (*'Amer. Journ. Obstet.,'* 1911, LXIII, *p.* 703). —**B. Sachs.**—After reference to numerous proved epidemics and the particular findings of Flexner in his work at the Rockfeller Institute, the writer asks these two questions of paramount importance: Is the infectious character of the disease positively established? How is the disease communicated from person to person, and can the spreading of the disease be checked or controlled? In a general way the epidemic occurrence of this disease is sufficient to prove its infectious or contagious character. The occurrence of several cases in one and the same family, or in one and the same house, and the massing of cases in certain districts of the same city, are also sufficient proof of the infectious character of the disease. In the study of the disease as it occurred in Sweden it was shown that the schoolhouse appeared to be the most prolific source of infection. The attempt to prove for New York City the exact way in which the epidemic originated or spread has been unsuccessful. All doubt as to the infectious nature of the disease has been removed by the experimental investigations of Flexner. The virus is conveyed by some extremely minute and filterable organism, the life history of which has not yet definitely been established. It has now been established that in suspected cases an early examination of the cerebro-spinal fluid, gained by tapping the spinal canal, will throw light upon the acute character of the infection. This examination should be made by trained physicians, and in this work the State authorities should lend a helping hand. In answer to the second question as to the manner in which the disease is carried from person to person only a few facts are known. It is definitely established that the disease is not violently infectious or contagious, for during an epidemic occurrence of the disease children afflicted with the disease were kept in general hospital wards, and not a single one of the other inmates of the wards of the hospital was afflicted with the disease. It is very possible that in this disease, as in other infectious diseases, apparently healthy persons may be the carriers of the disease. So far as any evidence has been gathered, there is some reason to believe that the organisms carrying the infection remain for a long time in the nose and throat of the affected individual. It thereby becomes incumbent upon physicians during the time of an epidemic to pay special attention to the nose and throat of children, and the question is whether the medical officers visiting our public schools should in such times give directions for the general and frequent disinfection of children's throats. Such precautionary measures may not find immediate acceptance but will in time have to be adopted, and if adopted will prove beneficial. The State authorities can assist in combating the disease by considering the manner in which the disease spreads from town to town. With the first announcement of an epidemic or the suspicion of it, thoroughly trained men should be sent to the infected district to do the necessary work. Laboratories of appeal should be instituted for corroboration of an early diagnosis in all suspected cases. Instructions should be issued by health officers with regard to notification and isolation. Though fatal cases are exceptional, mild ones are more numerous than previously suspected, and those of moderate severity can be considerably improved by patient and diligent treatment.

J. HOWELL EVANS.

Alcoholic neuritis in children (*'Corresp.-Blatt. f. Schweiz. Aerzt.,' October* 10, 1910. *Abst. 'Journ. A.M.A.'*).—**Eichhorst** reports amongst others the case of a boy, aged 8 years, who for two years had had pains in the lumbar region and increasing weakness in the muscles of the leg and back. The case was thought to be one of progressive pseudo-hypertrophy of the muscles, but the discovery that the boy stole out of bed to drink the alcohol in the lamps, etc., cleared up the diagnosis, and under baths, massage and potassium iodide he was restored to health in a few months. The knee-jerks were active throughout, and there was no pain, tenderness, or paræsthesia. Accumulation of fat occurred in the leg and lumbar muscles and there was some fibrillary twitching in the arms. The patient's father was a hard drinker. T. R. Whipham.

The nature and treatment of chorea (*'Bristol Med.-Chir. Journ.,'* 1911, xxix, *p.* 51).—**Carey F. Coombs,** in an interesting paper, discusses this disease at some length. The following is a summary of his conclusions: (1) Sydenham's chorea is a manifestation of rheumatic infection. (2) It is an organic disease of the brain, attacking all parts of the cortex equally and impartially, but affecting the basal grey matter less severely. (3) Consequently the symptoms are not only motor, but also psychical and sometimes sensory. (4) The motor symptoms are partly due to loss of inhibition, partly to cortical irritation. (5) In chorea the fallacy of the distinction between "functional" and organic nervous disease is exemplified. (6) Chorea can be fatal without the occurrence of meningeal inflammation. (7) This fact, with the phenomena of latent chorea, suggests that chorea may be due to direct intoxication rather than gross infection of the cranial contents. (8) The tendency of chorea is towards restoration of health to the brain. (9) Treatment consists of (*a*) removal of the cause—active rheumatic infection—by rest in bed with administration of salicylates during the active stages; (*b*) prolonged mental and bodily rest during convalescence; (*c*) improvement of general health by fresh air, full diet and tonics; (*d*) quieting of excessive movement by sedative drugs or packs and cure of paresis by massage. (10) The full-dose arsenical treatment is useless. (11) Chloretone is only useful in certain cases, and should not be given as a routine measure. J. Allan.

Causes and remedies of criminality in childhood (*'Arch. de Méd. des Enfants,'* 1911, xiv, *p.* 497).—**H. Dauchez.**—Criminality in childhood is on the increase. In 1904 in Russia there were twenty suicides among children; in 1909, 449. In France, of 1000 crimes against the person, 168 were committed by minors, and of 1000 thefts, 186 by individuals of 20 years of age and under. 51,033 women were arrested as street walkers, of whom 9,723 were girls under the age of 20. According to the author, criminals are made, not born. Apart from children obviously abnormal, such idiots, as kleptomaniacs, and pyromaniacs, juvenile delinquents are responsible, and must be held responsible, even when they act in fits of temper or lust. The evil effect of bad surroundings is admitted—14 per cent. had good homes, 85 per cent. bad. The bad effects of heredity are mentioned, but the author endeavours to minimise them, and instances cases of normal children born to deaf-mutes. The present-day factory, the breaking-up of the apprenticeship system, and the depopulation of agricultural districts, are responsible for much of this trouble. The author concludes by declaring that redemption is nearly always possible if suitable educative methods are adopted. Christopher Rolleston.

Pathology.

Hæmolytic action of certain streptococci isolated from cases of scarlatina (*'La Pediat.,'* 1911, XIX, *p.* 578).—**M. Mitra** finds that streptococci isolated from scarlatina cases present the same morphological and cultural characters as *Streptococcus pyogenes*. Those isolated from various tissues affected have a distinctly hæmolytic action. The strepto-hæmolysins of these germs are for the most part thermostabile, resisting a temperature of 65° C. for more than half an hour; some, however, do not. The hæmolysins are made by the bacterial cultures and are stored up in the bacterial bodies; they do not pass into the culture media, or only to a very limited extent. The hæmolytic property is not equally intense in all strains isolated from scarlatina cases, although those which have it most are often found in close proximity to those which have it least.

VINCENT DICKINSON.

The blood in pertussis (*'Cleveland Med. Journ.,'* 1911, X, *p.* 571).—**N. P. McGay** examined 138 cases with the following results. All showed a leucocytosis with a marked increase in the lymphocytes. Cases with a low leucocyte count showed a relatively high lymphocytosis and a marked decrease of polymorphonuclears. Such cases had apparently a much milder attack than cases showing a high leucocytosis with an increase of polymorphonuclears and a decrease in lymphocytes. In 120 cases a diagnosis was made from the lympho-leucocytosis, and was invariably confirmed by the clinical symptoms in from ten days to two weeks. J. D. ROLLESTON.

The anti-infectious power of the blood of infants (*'Journ. of Infectious Dis.,' October* 25, 1910. *Abst. 'Journ. A.M.A.'*).—**Tunnicliff's** experiments show that at birth the opsonic power of the blood-serum towards streptococci, pneumococci, and staphylococci is a little less than that of adult serum. During the first months of life it falls, and does not reach the opsonic power of the adult until about the second year. The phagocytic activity of the leucocytes towards the organisms mentioned follows a similar course, not reaching that of the adult until the third year. During the first and second years of life the anti-infectious power of the blood, as measured by the opsonic power of the serum and the phagocytic power of the leucocytes, is far below that of adult blood. T. R. WHIPHAM.

Anatomical condition of the stomach in a suckling five months after cure of pyloric stenosis (*'Jahrb. f. Kinderheilk.,'* 1911, LXXIII, *p.* 331).—**J. Simonn** had the opportunity of examining the stomach post-mortem of a child who died of pneumonia five months after cessation of the gastric symptoms. The wall of the stomach was much thicker than the normal. The author discusses the various views promulgated to explain the condition, and seems to be of the opinion that the stenosis may be due to a congenital malformation, and that secondary spasm of the musculature of the stomach may produce the characteristic symptoms. F. R. B. ATKINSON.

Test for diarrhœa caused by gas bacillus (*'Boston Med. and Surg. Journ.,' October* 13, 1910, *Abst. 'Journ. A.M.A.'*).—**Kendall** and **Smith** have investigated the distribution of the gas bacillus in the stools of children with diarrhœal diseases. Sterile tubes of milk are inoculated from the stools and incubated. If the gas bacillus is present the casein is largely

dissolved (usually at least 80 per cent.), and what remains is of a slightly pink colour and vacuolated. The culture also smells strongly of butyric acid. Gram-stained preparations show rather thick, short bacilli with slightly rounded ends. Out of 231 infants whose stools were examined, it was found possible to isolate the gas bacillus in 22. Six of these infants had apparently normal stools, two had thin watery stools with a few curds and a little mucus, and the remaining fourteen showed blood and mucus and many of them pus in the stools. The clinical diagnosis in these fourteen cases was uncertain, but suggested bacillary dysentery, but the dysentery bacillus could not be isolated. After twenty-four hours of starving and purgation the administration of buttermilk is an effective treatment. The gas bacillus thus seems to be an ætiological factor in a small group of the acute diarrhœas in infants. T. R. Whipham.

The bacteriology of acute respiratory infections in children (*'Journ. Amer. Med. Assoc.,'* 1910, II, *p.* 1241).—**Holt,** in a series of over 500 patients at the Babies' Hospital, New York, finds that in cases of pneumonia the pneumococcus and *Staphylococcus aureus* predominate. Out of 124 cases the former was present in 94 and the latter in 116. *B. influenzæ* was found in 47 and the streptococcus in 63. The last-named was rarely the predominant organism found, though often present in small numbers. This may be accounted for by the fact that few of the pneumonias were secondary to such infections as measles, diphtheria, etc. The character of the infection in bronchitis is essentially the same as that in pneumonia. Thus in 133 cases the pneumococcus was found in 105, the *Staphylococcus aureus* in 117, *B. influenzæ* in 63, and the streptococcus in 71. The first two were also found to predominate in cases of pulmonary tuberculosis, each being present in 16 out of 23 cases. The influenza bacillus was found in 6 and the staphylococcus in 12. T. R. Whipham.

Rickets: Its cause and treatment (*'Clinical Journ.,'* 1911, XXXVIII, *p.* 364).—**Eric Pritchard** regards the pathogenesis of rickets as a vicious circle of events consisting of an inefficient liver connected up by innumerable links, with a disturbed central nervous system. The liver may be primarily damaged by faulty methods of feeding, or it may be inherently inefficient. As a rule there are first indigestion, then toxic products of this, then efforts on the part of the liver to oxidise or destroy these products, then collapse or failure with the escape of these products into the general circulation, and finally, poisoning of the nervous system. This in turn leads to further hepatic inefficiency and also to incapacity on the part of the other great furnaces of the body, so that now even the normal food products cannot be oxidised or physiologically disposed of. Hence follows an acidosis, and for the neutralisation of these acid products the tissues are deprived of calcium, ammonia, and other elements. The author proceeds to discuss the causation of the various symptoms of rickets in the light of this theory, and to apply it to the treatment of the disease. Reginald Miller.

Histological note on the origin and function of Hassall's corpuscles in the thymus (*'La Pediatria,'* 1911, XIX, *p.* 457).—**A. Barbarossa** finds that in man the thymus does not disappear at the age it is usually supposed to, *i. e.* at the fourteenth or fifteenth year, that it is a gland with an internal secretion with an undefined function which is exercised chiefly in intra-uterine life. This function is almost entirely connected

with Hassall's corpuscles, which are of two kinds, one appertaining to the stage of evolution, the other to the stage of involution of the gland. Hassall's corpuscles in the stage of evolution are epithelial remains of the thymus gland, the function of which is probably due to them; while those met with in the stage of involution of the thymus seem to have their origin in great measure in the proliferating endothelium of the vessels and capillaries. This is shown by the fact that in the involuting thymus there is a marked scarcity of blood-vessels, while on the other hand Hassall's corpuscles increase and tend to enlarge. VINCENT DICKINSON.

The changes in the thyroid gland in chondro-dystrophia fœtalis and osteo-genesis imperfecta (*'Jahrb. f. Kinderheilk.,'* 1911, LXXIII, *p.* 50).—**M. Sumita** devotes a long article to the consideration of the literature and of his own experiences from the post-mortem examination of two cases of the former and three of the latter disease, controlled by the examination of the thyroid gland in seventeen cases of fœtuses from the eighth month to children $1\frac{1}{2}$ years old. The author's results are as follows: (1) In both diseases the size and weight of the gland remain within normal limits. (2) There is no similarity between the condition of the thyroid in his cases and that found in myxœdema and cretins, but on the contrary the gland compared with the control cases was normal. (3) The slight anomalies found in cases of chondro-dystrophia in the thyroid gland are just as frequently found in normal babies. (4) There is no relationship between chondro-dystrophia fœtalis and myxœdema or cretins. (5) No form of fœtal skeletal disease can be referred to disturbance of the function of the thyroid gland.
F. R. B. ATKINSON.

The importance of pathologico-anatomical changes in the parathyroid glands in the pathogenesis of infantile tetany (*'Monatsschr. f. Kinderheilk.,'* 1911, X, *p.* 154).— **G. Jörgensen** comes to the conclusion that Escherich is wrong in supposing that the parathyroid glands have any connection with tetany. He finds support for his view in Yanase's examination of the glands in fifty cases in which more than half showed no changes although tetanic conditions were present during life. In the author's own case of a child, aged 7 months, the parathyroids on the most careful microscopical examination were found quite normal. F. R. B. ATKINSON.

Familial chronic tetany (*'Jahrb. f. Kinderheilk.,'* 1911, LXXIII, *p.* 601).—**F. Schiffer.**—Tetany in children has been supposed by some to be due to a special form of disturbance of metabolism and by others to the absence or deficiency of function of the epithelial bodies in which hæmorrhages or remains of the same were found by Yanase in 71 cases out of 104. Schiffer had the opportunity for microscopical examination on section of the epithelial bodies in four brothers who died from tetany but found no hæmorrhages or remains of such in any of them, and concludes therefrom that tetany is a disease of the nervous system, the exact condition of which is still unknown. F. R. B. ATKINSON.

The relation between infantile tetany and the parathyroid glands (*'Riv. di Clin. Pediat.,'* 1911, IX, *p.* 413).—**L. Pollini** has undertaken extensive observations on the pathological anatomy of parathyroids in three cases of tetany, and in one case found abundant connective-tissue stroma

which divided the parenchyma of the gland into numerous small lobules; there was no hæmorrhage. In a second case there were vesicular cysts, lined with epithelial cells, some filled with an acidophile colloid substance; no hæmorrhage. In a third case there was circumscribed hæmorrhage in a cyst, and also diffuse hæmorrhage. In three cases of broncho-pneumonia there was slight development of connective tissue, in two cases of tuberculosis general connective-tissue proliferation, in four cases of rickets diffuse sclerosis. In two of diphtheria the glands were normal. In two fœtuses there were cirrhosis and hæmorrhagic foci. It is noteworthy that in one case of tetany and all those of rickets there was sclerosis, which may explain the coincidence of rickets with tetany. The author also undertook observations on the effects produced by the administration of parathyroidin by mouth in cases of tetany. He gave it in six cases for periods between ten to thirty-eight days; in the majority of them the contractions disappeared from the fifth to the eighth day—the laryngo-spasm remained persistent.

VINCENT DICKINSON.

Hæmorrhage in the parathyroids and infantile tetany (*'La Pediat.,'* 1911, XIX, *p.* 561).—**A. Jovane,** seeking to discover the relation between parathyroid insufficiency and tetany, reports six cases, two of marked tetany and four of other diseases. None of them had any kind of hæmorrhage into the parathyroids, either general or circumscribed, intercellular or subcapsular, nor any trace of blood-pigment. In one case of tetany and another of tuberculous meningitis there was a certain amount of increase in the perivascular connective tissue. There was nothing else abnormal. The author admits the objection that parathyroid hæmorrhage occurs during the first months of life and the remains of it disappear within a year. Both the cases of tetany were over two years of age, however, the age at which it is most frequent. Experiments on dogs were also made by the author, who, while granting that parathyroid insufficiency has a large share in the development of infantile tetany, cannot accept the assertion made by some observers that there is a more or less constant relation between tetany and parathyroid hæmorrhage, especially since the histological study of parathyroids of infants with tetany show no marked changes, either permanent or progressive, which could in any way interfere with the function of their glands.

VINCENT DICKINSON.

Examinations of spinal cords in tetany (*'Monatsschr. f. Kinderheilk.,'* 1911, X, *p.* 261).—**J. Zappert** finds on the microscopical examination of spinal cords in this disease, six in all, that there are no changes either in the cord or spinal ganglia which can be looked upon as pathognomonic.

F. R. B. ATKINSON.

Little's disease (*'La Clin. Infant.,'* 1911, IX, *p.* 296).—**Mme. Long-Landry** publishes as her thesis her anatomical and pathological investigations on this disease. In the four cases sent to her by M. Variot, she found—(1) a meningo-encephalitis which had attacked the brain about the fourth or fifth month of intra-uterine life, and produced, by the cortico-ependymal adhesions, a later atypical development, assuming the form of a congenital porencephaly. The state of the cortex of the brain explained the integrity of the intellectual faculties. (2) A later and more diffuse meningitis accompanied by an inflammatory condition of the epen-

dyma and choroid plexus and resulting in an atrophy and definite destruction of the cerebrum and cerebellar cortex. (3) In the third child, an idiot, inflammation of the meninges. Ependyma and choroid plexus had caused no alteration in the form of the convolutions, but alterations in the structure of the cortex and white matter. (4) Lesions of the same kind as in the preceding cases but with a spinal localisation; a meningo-myelitis with scattered lesions, both interstitial and parenchymatous. In spite of the diffusion of the lesions throughout the spinal cord the spasmodic condition was limited to the lower limbs; the upper limbs had merely some uncertainty in movement. These cases prove that Little's disease arises from lesions different both in their seat and in their nature. There are cerebral and cerebro-spinal forms and also the purely spinal form described by Dejerine. The pathological factors are of two kinds—infectious causes which act during uterine life, and the traumatism of childbirth. The presence of contractures will not alone explain the functional weakness; when these are present they mask the motor disturbance which has been described under the name of "choreo-athetosis"; considered as superadded phenomena they represent rather an imperfection of voluntary mobility. The evolution of the rigidity towards the paraplegic form and the anomalies of voluntary motility are the consequence of the early involvement of the nervous centres. They represent the functioning of a nervous system stricken in the course of development and adapting itself to lesions by the organisation of supplementary phenomena. This physiological interpretation common to all congenital diplegias, whether beginning in intra-uterine life or at the moment of birth, allows of their being placed in one group under the denomination of Little's disease, according to the man who first described them. VINCENT DICKINSON.

Cerebral palsy in children (*'Jahrb. f. Kinderheilk.,'* 1911, LXXIII, *p.* 675).—**A. Lindermann** and **V. Marenholtz** describe four cases of the above disease with their post-mortem findings, and believe that the disease is caused (1) by defects of the brain as a result of endogenous malformation of the embryo (anencephaly, partial aphasia, microgyria, etc.); (2) by lesion of the blood-vessels with hæmorrhages into the membranes, subdural space, and brain substance, occasioned by damage to the skull before, during, or after birth; (3) by encephalitis resulting from various infectious diseases and diseases of the bowel. F. R. B. ATKINSON.

Fatty change in the muscular tissue in primary amyotrophy (*'La Pediat.,'* 1911, XIX, *p.* 22).—**E. Peruzzi** made a biopsy on a boy of 10 years, the subject of primary amyotrophy of mixed type of the scapulo-humeral form (Erb). The examination proved that the fat originated (1) directly from the retrogressive protoplasm of the muscular fibre; (2) from the muscle-cells of the endo-sarcolemna; and (3) from the muscle-cells of the extra-sarcolemma. VINCENT DICKINSON.

Is acute chorea an infectious disease? (*'Journ. Amer. Med. Assoc.,'* 1910, II, *p.* 1198).—**Gordon** concludes that, similarly to acute polio-myelitis, acute chorea is probably associated with some infectious element. The onset of the disease and its pathological anatomy render the two affections analogous. The fundamental difference lies in the fact that in the one disease the motor cells are being destroyed, hence the paralysis, while in

the other the motor cells undergo irritation, hence the twitching. The destructive effect in the former and the irritating effect in the latter point to a difference in the virus in the two affections. Hudovernig found marked vascular lesions in the central nervous system in chorea, consisting of dilatation of the capillaries and perivascular infiltration with round-cells and œdema. Degenerative changes are found in the cortical cells, and vacuolation is present in the cells of the cornu Ammonis. There is also slight ependymitis and leptomeningitis. A large number of special corpuscular bodies (*Chorea-Körperchen*) are disseminated around the blood-vessels, especially in the medulla and pons, which have an irritative action on the pyramidal tracts and thus produce choreic movements. Whether these bodies are specific of chorea it is difficult to say. It is possible that a certain variety of staphylococcus is the cause of chorea, but so far it has not been determined.

T. R. Whipham.

Otology, Rhinology, and Laryngology.

Symptoms of acute otitis media (*'Med. Klin.,' October* 16, 1910. *Abst. 'Journ. A.M.A.'*).—**Blum,** after a further experience of 200 cases, confirms his statement that pressure upwards and inwards towards the auditory canal behind the angle of the jaw in the groove formed by the inferior maxillary bone and the anterior border of the sterno-mastoid on the affected side causes decided evidence of pain in cases of otitis media. The symptom is constant, and of special diagnostic value in infants. T. R. Whipham.

A preliminary note on the influence of position in relation to the occurrence of mastoiditis and its complications (*'New York Med. Journ.,'* 1911, II, *p.* 521).—**C. A. Adair-Dighton** asks why left-sided "mastoids" are more common than right? He finds at least 90 per cent. of cases of mastoiditis are left-sided. He believes this to be due to the fact that the majority of people sleep on the right side, thereby draining the right ear and causing left-ear discharges to be retained.

Macleod Yearsley.

The treatment of otitis media purulenta and mastoiditis in infants (*'New York Med. Journ.,'* 1911, I, *p.* 271).—**J. R. Page** extols the use of peroxide of hydrogen to loosen the tenacious discharge in these cases. He insists on the importance of early incision of bulging drums whereby the duration of the middle-ear condition is considerably lessened. When mastoiditis has developed, treatment by operation should be considered before the vitality is additionally lowered by septic absorption. No mention is made as to the uses of vaccine therapy in these cases.

Macleod Yearsley.

Permeating mastoid meningitis (*'Practitioner,'* 1911, II, *p.* 239).—**J. B. Pike** considers this name should be given to those cases of mastoid meningitis in which the infection is conveyed through the bony canals, along the sheaths of nerves and vessels by a permeative process. The symptoms are very similar to ordinary mastoid disease, but there is almost complete absence of pain over the mastoid. The author describes two cases in two children of eight, both of which died notwithstanding operation.

F. R. B. Atkinson.

The use of the Hiss extract of leucocytes in infections, particularly erysipelas, with a report of cases (*'Med. Record,'* 1911, I, *p.* 929).—**J. G. Dwyer** read this paper before the Medical Society of the County of New York. The largest number of his cases followed mastoidectomies and nose and throat operations, and it was interesting to note that the healing of the wound was not in any way delayed (*cf.* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1910, VII, *p.* 523). MACLEOD YEARSLEY.

The effect of maxillary readjustment upon the development of nasal chambers and face (*'Annals of Otol., Rhinol., and Laryngol.,'* 1910, XIX, *p.* 885).—**Geo. V. J. Brown.—Widening the dental arches in nasal stenosis; its results and possibilities** (*ibid.*, *p.* 933). —**Nelson M. Black.**—The two papers require to be taken together. **Brown** considers whether direct improvement of intra-nasal conditions can be effected by treatment of dental and maxillary conditions, and if so, how may it best be accomplished. He discusses the developmental principles underlying the question and the effects of adverse muscular action. He demonstrates the practicability of improving nasal deformities by separating the maxillæ and directly increasing the size of the nares, and then proceeds to demonstrate that arrest of growth in width across the palate can cause deviated septum, contracted nares, or even complete nasal stenosis. He compressed the palates of eight-week-old pups by wire, so as to reproduce as nearly as possible the maxillary condition of mouth-breathing children, one control pup being kept. At the end of six months the puppies were killed, the heads frozen and sections cut, reproductions of which are given. The control puppy thrived, the others became emaciated, and their noses showed stenosis, deviation of the septum, etc. **Black** deals especially with septal deflections and the objects to be obtained in correcting them. He considers that the dental arch can be widened for a deformed septum accompanied by dental irregularities up to middle life, and cites one good result in a woman, aged 33 years. The results in children with commencing nasal stenosis appear to be very marked. The author considers to be answered in the affirmative the question which he puts thus: "Given a case in which we have insufficient space for proper nasal breathing, with an arch with seemingly perfect occlusion, is it our duty and have we the right to alter the shape of the maxillæ and rearrange the occlusion to allow the nose to properly functionate?" MACLEOD YEARSLEY.

Purulent rhinitis in scarlet fever (*'El Siglo Medico,'* 1911, LVIII, *p.* 278).—**E. G. Gereda** points out that this is one of the most serious complications in this exanthem. At the hospital in Aubervilliers, out of 779 cases of scarlet fever 29 died, but of these 29, purulent rhinitis accounted for 9 deaths. It commences most frequently in the first three days of the disease, but one should be on one's guard again, especially on the tenth day or so, for any sign of nasal obstruction. There is usually sore throat at the same time. In one case examined bacteriologically only streptococci were found, in another some variety of Klebs-Löffler bacilli. The treatment should be energetic, by irrigations three or four times during the day, one, two or three times at night. He uses a solution consisting of equal parts of hydrogen peroxide, 10 volumes, and a ·4 per cent. solution of bicarbonate of soda. The mouth as well as the nose should be irrigated. After irrigation an ointment of menthol or resorcin (1 in 30) can be applied to the nostrils. M. D. EDER.

Nasal obstruction and its consequences in school-children (*'Brit. Med. Journ.,'* 1911, II, *p.* 472).—**Cecil E. Reynolds** classes nasal obstruction in school-children, in order of frequency, as: (1) Adenoids; (2) enlarged turbinate bones; (3) thickened and deviated septum and spurs; (4) nasal polypi. He points out the association of cardiac valvular disease with enlarged tonsils. He compares London and Berkshire children, and points out that (1) London teeth are incomparably better; (2) London nutrition is inferior; (3) enlarged tonsils are less frequent; (4) phthisis is more common. The paper, a short one, repays perusal. MACLEOD YEARSLEY.

Sore throat (*'The Clinical Journal,'* 1911, XXXVIII, *p.* 241).—**H. Tilley,** dealing with acute sore throat in children, urges the first importance of: (1) Looking for a rash; (2) taking the temperature. He enters upon the differential diagnosis between tonsillitis and diphtheria, and emphasises the value of a bacteriological examination, isolation and antitoxin when in doubt. MACLEOD YEARSLEY.

Reflex affections of the tonsil (*'New York Med. Journ.,'* 1911, II, *p.* 270).—**R. B. Faulkner** discusses a little-known subject, and appears to believe that many cases of apparent disease of the tonsil are really reflex and dependent upon other conditions, as carious teeth, œsophageal carcinoma, etc., and deprecates what he terms "the present operative folly against the faucial tonsils." MACLEOD YEARSLEY.

Dental caries as a cause of enlarged tonsils (*'The Medical Officer,'* 1911, VI, *p.* 87).—**Cameron Gibson** discusses this question in an able paper based upon the inspection of nearly 2000 children in Liverpool, and illustrated by tables and diagrams. He proves the existence of a correlation of considerable size between dental caries and enlarged tonsils, difficult to explain by the assumption of a common cause, and probably due to direct bacterial infection either of teeth from tonsils or of tonsils from teeth, the evidence being in favour of the latter connection. MACLEOD YEARSLEY.

Relation of the tonsil operation to the soft palate and voice (*'New York Med. Journ.,'* 1911, II, *p.* 265).—**G. Hudson-Makuen** concludes that normal tonsils are helpful rather than prejudicial to phonation, whilst hypertrophied tonsils interfere with the action of the muscles, deflect the vibrating column of breath, and impair the normal resonance of the oral cavity. Degenerate tonsils are prejudicial to phonation by injuring health and setting up catarrhal conditions. The two important indications for tonsil operation are removal of foci of infection and increase of functional efficiency of respiratory, phonatory, and articulating organs. The tonsil that requires removal is always prejudicial to vocal excellence, and should be removed with great care and deliberation. The popular belief that the removal of tonsils is injurious to the voice is well founded, and is due in a large measure to careless and bad surgery. MACLEOD YEARSLEY.

Are adenoids congenital? (*'Monatsschr. f. Kinderheilk.,'* 1911, X, *p.* 162).—**Prof. Czerny,** as a result of careful consideration of the question for some years, does not agree with Erdely that adenoids are congenital.

F. R. B. ATKINSON.

The relation of adenoids and hypertrophied tonsils to retarded mental and physical development (*'Med. Record,'* 1911, II, *p.* 475).—**E. Bosworth McCready** concludes that tonsils and adenoids occur in individuals who present symptoms of hypoplasia, resulting either from hereditary or developmental causes; that there would seem to be an intimate relationship existing between perversions of the internal secretions of the ductless glands and hypoplasia, resulting in hypertrophied tonsils and adenoids; that tonsils and adenoids are factors in retardation by their mechanical action as sources of reflex irritation, and as impediments to the proper development of the cerebral centres concerned in speech; and that removal of tonsils and adenoids is not sufficient, in cases of marked defect, to bring about restoration to normal. Special training and measures directed towards the amelioration of the underlying hypoplastic condition are necessary. MACLEOD YEARSLEY.

Acute tonsillitis and its treatment (*'Med. Record,'* 1911, I, *p.* 852).—**H. Hays** remarks that the causation of acute tonsillitis is apparent as soon as a culture is taken, streptococci being the agent in over 80 per cent. of cases. Differentiation from diphtheria is important. Tonsillitis must be looked on as a local disease causing systemic infection and must be primarily treated locally. The crypts must be opened up and drained, and swabbed with silver nitrate in a strength of 50 per cent. By this method the patient is usually well in twenty-four hours. MACLEOD YEARSLEY.

Technique in adenoid and tonsil operations (*'New York Med. Journ.,'* 1911, I, *p.* 459).—**L. D. Alexander** and **J. T. Gwathmey** discuss this subject under the headings of preparation, anæsthesia, technique, and after-treatment. They advise gr. v of chloretone, one hour before operation, in children over six years old, and preliminary spraying of the upper air-passages with antiseptic solution. They advise anæsthesia "deep enough to abolish all reflexes, including the cough, swallowing, and tongue reflexes," anæsthesia being induced during sleep. During operation, blood is removed by means of a graduated Wolff bottle, or suction pump, and catheters passed into the nasal chambers. After the removal of adenoids and tonsils, the vault of the pharynx is wiped over with alcohol or gauze and the nares douched with cold saline solution. The paper is a remarkable one, if only from the point of view of the manufacture of mole-hills from mountains.
MACLEOD YEARSLEY.

When shall we remove tonsils, and what type of operation shall we do? (*'Boston Med. and Surg. Journ.,'* 1911, I, *p.* 414).—**E. A. Crockett** deprecates the wholesale removal of tonsils, but advocates their removal (1) in all cases presenting large non-adherent tonsils largely filling the cavity of the pharynx because of the obstruction to breathing, their possible interference with nutrition, and to secure proper jaw development at the period of the second dentition; (2) in all cases associated with enlarged cervical glands, articular rheumatism where the tonsil is probably an ætiological factor; (3) in all cases of repeated peritonsillar abscess. As regards the type of operation, enucleation is to be preferred, especially in groups 2 and 3. In simple hypertrophy devoid of symptoms the author thinks tonsillotomy is sufficient. Some remarks upon post-operative hæmorrhage conclude the paper. MACLEOD YEARSLEY.

Mental suggestion as a substitute for anæsthetics in the removal of tonsils and adenoids from children (*'Med. Record,'* 1911, i, *p.* 1004).—**Gulliver,** frightened by the number of reported deaths from anæsthetics, and rightly considering operation without to be "unjustifiably cruel," has tried mental suggestion. His method appears to be the sprinkling of alcohol and compound tincture of lavender on a mask and assuring the child he is going to sleep. He states that, in 200 cases, he has been successful in 80 per cent.

MACLEOD YEARSLEY.

Report of a case of probable abscess of the larynx, requiring intubation, followed by inspiration pneumonia (*'Cleveland Med. Journ.,'* 1911, x, *p.* 577).—**J. J. Thomas** describes the case of a girl, aged 3½ years, who developed a spasmodic cough, followed rapidly by inspiratory dyspnœa, with slight fever. She grew gradually worse, with increasing rises of temperature, and finally required intubation, immediately after which she coughed up about a teaspoonful of pus, with immediate relief. In the evening, however, she developed pneumonia, and four days later it was found necessary to extubate. An attack of severe dyspnœa occurred three days after, but re-intubation was not necessary. The pneumonia ran a peculiar course, the temperature fell from 104° to 98° F. on the ninth day, rose at noon on the tenth day to 102°, falling at midnight to 99·6°, and again rising to 105·2° at noon on the eleventh day. For more than two weeks after the extubation there was complete aphonia. MACLEOD YEARSLEY.

Foreign bodies in the bronchi and bronchoscopy (*'Paris Méd.,'* 1911, ii, *p.* 241).—**Guisez** describes four cases of the successful removal of foreign bodies by means of the bronchoscope. The first patient was a child, who retained an open penknife in the right bronchus for more than one month. This body measured 7 cm., and was removed without a general anæsthetic. The second patient, aged 12 months, was relieved of a rabbit bone 1 cm. long. The third case (adult) was one of an artificial denture, and the fourth, a boy, aged 10 years, was a plum-stone. The author remarks upon the extraordinary tolerance of the air-passages to metallic foreign bodies. MACLEOD YEARSLEY.

Bronchoscopy in small children (*'Deutsch. med. Wochens.,'* 1911, xxxvii, *p.* 1204).—**Killian** reports a series of cases in which bronchoscopy was done in small children for removal of foreign bodies, and was surprised at the large number which came to intubation or tracheotomy following the procedure. He made a careful study of the question to see if this swelling of the larynx and glottis could be avoided. He found from measurements that the bronchoscope was frequently so large that it was bound to cause trauma in the subglottic space. He considers that examination should be made first to see if œdema or inflammation already exist in the subglottic space. By picking the cases free from injury to this space and measuring the instruments so that they fit, intubation and tracheotomy only can be avoided. If the cases must eventually come to tracheotomy, why not do the bronchoscopy through a tracheotomy wound to begin with?

MACLEOD YEARSLEY.

Reviews.

La Pratique des Maladies des Enfants. Vol. IV: Maladies du Cœur et des Vaisseaux, du Nez, du Larynx, des Bronches, des Poumons, des Plevres et du Mediastin. Paris: J. B. Baillière et Fils, 1911. Price 16 frs., paper cover; 17 frs. 50c., bound.

This is the joint work of Drs. Moussous, Barbier, Guinon, J. Hallé, Zuber, Armand-Delille, Audeoud and Bourdillon, and is one of a series of eight volumes. It is bound well in stout paper covers; the printing is excellent, though the illustrations are not quite perfectly reproduced. The names of English writers, far too few of whom are quoted, are somewhat mutilated. Another fault is the disproportionate treatment accorded to the different subjects. Out of nearly 700 pages, the heart is allowed only 150, while diseases of the larynx are actually given over 70. It is perhaps ungracious to carp at this, however, for the articles on laryngeal diseases are excellently arranged and most carefully written by Dr. H. Barbier. In fact, the key-note of the whole book is thoroughness, and the writers have set themselves the hard task of treating impartially all debateable matters in a manner worthy of so ambitious a book.

Several details may be of interest. The endocarditic origin of some of the congenital malformations of the heart is more respectfully treated than in English text-books. It is curious to find no mention of Duroziez in a rather luke-warm discussion of the congenital form of mitral stenosis. An extraordinary amount of attention is paid to the subject of tuberculous endocarditis, a lesion of the very rarest type according to English writers. The paragraphs on rheumatic carditis are good in so far that the writer has grasped the fundamental fact that the lesions of the various parts of the heart ought to be considered together and not separately. One excellent sentence must be quoted: "la chorée n'est qu'un symptôme." Turning to the section which deals with respiratory disorders we find very full discussions of various interesting subjects. The writers find that lobar and lobular pneumonia in children are not sharply separated entities; the forms intermediate between the characteristic, extreme types they describe as "pulmonary congestions." The lengthy account of pulmonary tuberculosis and "adénopathie trachéobronchique" prompts the thought that these affections must be much more frequent in France than they are in England, or else that the French physician is very fond of this diagnosis. There is a most useful list of institutions to which tuberculous children may be sent. Long and thorough descriptions of whooping-cough and asthma bring the volume to a close.

The writers have throughout done their work well, and the volume worthily represents the modern French point of view in relation to diseases of the circulatory and respiratory organs in childhood. A comprehensive index is badly needed in order to make the book useful as a standard work of reference, a part for which it is in all other respects amply fitted. C. C.

La Pratique des Maladies des Enfants. Diagnostic et Thérapeutique. Vol. vii. Chirurgie des Enfants. By Drs. Broca, Froelich, Mouchet, Guisez, and Terrien. Paris: J. B. Baillière et Fils, 1911. Price 14 frcs., paper cover; 15 frcs. 50 c., bound.

Perhaps there is more difference between the French and the English point of view when approaching the diseases of children than is generally

supposed; but certain it is that English readers will lay aside vol. vii of 'La Pratique des Maladies des Enfants' with a sense of disappointment. This volume is devoted to the surgery of children, the first half of the book dealing with the digestive, circulatory, pulmonary, and genito-urinary systems, and the second half with the special senses. The first chapter, setting forth the general principles of surgery in children, is admirably written, and is undoubtedly the best in the book. Malformations generally are well described and well illustrated, especially those at the lower end of the rectum and the varieties of cysts found in connection with the spermatic cord.

But when the regional surgery is discussed the impression is rapidly gained and is strengthened the further one proceeds, that the book is written by those who are accustomed to look upon the diseases of children, not as something special and apart, but merely as affections of miniature adults. Nowhere is there any allowance made for age in regard to treatment, though it is scarcely necessary to point out that though an infant of six months may suffer from the same disease as a child of twelve years old, the treatment of the two cases will probably differ widely. This impression is strengthened by the fact that many of the illustrations (Nos. 101, 102, 121, 122, 123 and 132, to mention only a few) are those of adults. The book also appears to be extremely unbalanced; this may be due to the large number of authors taking part in its compilation. It is in places a mine of information as to the rare abnormalities which have been recorded in French medical literature; but as regards the simpler and commoner troubles to which children are peculiarly liable, such as incontinence of urine or hernia, where details of practical treatment are always welcome, very little useful information is offered to the reader. Many of the statements made are quotations from other writers which, even when labelled with a well-known name, are of small value if divorced from their context.

Of the three pages devoted to cystitis, two are restricted to the consideration of the tuberculous form. Of the seven pages dealing with all varieties of orchitis and epididymitis no less than five are restricted to tubercle; incontinence of urine is dismissed in barely two and a half pages. Surely these proportions are hardly prompted by practical experience either in the wards or in the out-patient clinics.

Many paragraphs could quite well have been omitted, as they are concerned with affections which are in no sense peculiar to children, and their place could be filled better by views representing the experience of the different writers. We refer more especially to the paragraphs on tumours of the vagina, disorders of menstruation, prolapse of the uterus, gangrene of the scrotum, ozæna, and inflammation of the maxillary antrum. Many of the illustrations of the use of ordinary surgical instruments in the examination of the ear, nose and throat (the pictures are of adults) are superfluous to any who have had an adequate medical training. These points, however, which appear to us to be defects, may assume a different character in the eyes of our neighbours across the channel, as we hinted at the beginning; it depends on the point of view. D. C. L. F.

Lateral Curvature of the Spine and Flat-foot, and their Treatment by Exercises. By J. S Kellett Smith, F.R.C.S. Bristol: John Wright & Sons, 1911. Price 5s. 6d. net.

It is unfortunately true that the ordinary orthopædic text-books when dealing with scoliosis deal mainly with the more severe forms and with high-grade deformities. Fortunately these are comparatively rare in this country,

particularly in private practice. The slighter postural deformities are, however, very common, especially among growing girls, and their exact recognition is very important to the practitioner, and particularly to the school doctor. Mr. Kellett Smith deals with these slighter forms alone, giving a careful description of their causes and of their treatment by exercises. He is evidently considerably influenced in his methods of treatment by Klapp, whose creeping exercises have not been sufficiently practised in this country, although they are very highly spoken of in Germany, where scoliosis is apparently much more common than it is with us. And perhaps one of the most useful points about the book is the short but detailed descriptions of these creeping exercises. In his account of other exercises Mr. Kellett Smith very rightly lays great stress upon the necessity for careful attainment of the initial position before the exercise is started, a matter which is almost more important than the exercise itself.

It is unnecessary to follow the author through his account of the causation of lateral curvature; the chief points are all clearly and fairly put forward. Incidentally an important and interesting new theory of the action of the ribs in producing or increasing rotation of the vertebræ is advanced. In stating the frequency of lateral curvature in the sexes the author lays himself open to criticism by saying that it is much more frequent in females than in males. This is, of course, true of the more severe deformities, but in the slighter cases with which Mr. Kellett Smith is dealing all school statistics show an equality in the percentage occurrence in boys and girls.

In the second part of the book a brief account is given of the treatment of the slighter grades of valgus ankle and flat-foot. In addition to exercise treatment the principles of altering the line of transmission of the body-weight by "clumping" the boot and "crooking" the heel are described.

These latter methods have been greatly neglected by surgeons in the south of England, and it is to be hoped that Mr. Kellett Smith will succeed in calling attention to them. R. C. E.

The Deaf Child: A Manual for Teachers and School Doctors. By J. Kerr Love, M.D. Bristol: John Wright & Sons. London: Simpkin, Marshall & Co., 1911. Pp. 192. Price 4s. 6d. net.

Dr. Kerr Love, whose name has long been known, and whose work cannot be too much appreciated by those who have the care of the deaf child really at heart, has produced a volume as valuable as it is fascinating. It is not a book that can be done justice to in a short review, and only those who have worked with, and for the deaf child, can appreciate it at its true worth. As a most appropriate foreword, Dr. Kerr Love quotes words written to him by Helen Keller in 1910, in which that gifted woman (who would have shone had she been hearing and seeing as she has shone when deprived of those faculties) says: "It will be a great step forward when the physician takes part in the work for defectives who have hitherto been entrusted wholly to teachers in schools." This step forward is being taken, and to Dr. Kerr Love we owe the stimulus which has initiated it. The future of the deaf child, his appreciation and education lie in the domain of the doctor; the prevention of congenital and, still more, of acquired deafness come equally within his sphere of action. 'The Deaf Child' should be in the hands of every teacher of the deaf, of every otologist and of every general practitioner. It can teach them all, and Dr. Kerr Love will rank high among those members of the profession who have worked for the good of mankind. M. Y.

THE LIFE-HISTORY, FUNCTION, AND INFLAMMATION OF THE APPENDIX. By EDRED M. CORNER, M.A., M.C., F.R.C.S. London: John Bale, Sons & Danielsson, Ltd., 1911. Price 1s.

THIS little book is a reprinted address to the Clinical Society of Manchester. It deals with the physiology and function of the appendix, and of the relation of these with the more uncommon cases of appendicitis. We notice that in discussing the movements of the large intestine the author makes no mention of anti-peristalsis, which it has now been conclusively proved occurs normally at the cæcal end. The cases of undiagnosable appendicitis mentioned by the author are of great interest, as they are undoubtedly more common than are generally supposed and too little attention has hitherto been paid to them. We quite agree with the author that more harm is done by postponing operation in cases of appendicitis than in operating too frequently. The pamphlet is one which we can strongly recommend for perusal to anyone interested in the subject of appendicitis. P. L. M.

RECHERCHES EPIDÉMIOLOGIQES, CLINIQUES ET THÉRAPEUTIQUES SUR LA MÉNINGITE CÉRÉBRO-SPINALE. By Dr. ROBERT DEBRÉ. Paris: 1911. Félix Alcan. Price not stated.

THE writer, in his capacity of assistant to Dr. Netter, had ample opportunities of observing the recent outbreak of cerebro-spinal meningitis in Paris, and has incorporated in his inaugural thesis the results of their joint investigations to which we have already had occasion to allude (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1909, vi, p. 427).

The monograph is divided into three parts. In the first, which is devoted to the epidemiology and prophylaxis of cerebro-spinal meningitis, the question of meningococcus carriers is thoroughly discussed and the methods recommended for disinfection of the rhino-pharynx are shown to be extremely uncertain in their action. In the second part, which contains an admirable clinical description of the diseases in infants, the writer insists on the frequency of incomplete forms which render the diagnosis so difficult, and clearly shows that the posterior basic meningitis of English writers is anatomically, bacteriologically, and clinically identical with epidemic cerebro-spinal meningitis. In the third part the serum treatment and complications connected therewith are discussed. J. D. R.

TRANSACTIONS OF THE ANNUAL CONFERENCE OF THE NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION AND OTHER FORMS OF TUBERCULOSIS. Pp. 220. London: Adlard and Son, 1911. Price 2s. 6d.

THE Association has done well in publishing an account of their transactions at the Congress held in London in July last. The President of the Local Government Board opened the Congress with an excellent address, in which he drew attention among other things to the decline of tuberculosis in the last ten years of 19 per cent. in England and Wales, 24 per cent. in Scotland, and 30 per cent. in London, to the fact that pauperism and consumption go hand in hand, and also to the evil wrought by alcohol in propagating tuberculosis. The sessions were divided into five: (1) Education by means of lectures, exhibitions, etc., on which Dr. Woodhead and Sir William Younger spoke. Dr. Shrubsall drew attention to the good that

could be done by instructing school children in cleanliness, clothing and fresh air, and in practical enforcement of personal hygiene. Mr. Marsh described the work of the Cambridge branch of the League for Physical Education and Improvement, and Mr. Head the work among friendly societies and trade and other organisations of the working classes, and drew attention to the good that might accrue from lectures on the subject. (2) Machinery of detection, introduced by Dr. Philip. Dr. Wall dwelt on the hospital out-patient department, and suggested that after the patient has been certified at the hospital as suffering from pulmonary tuberculosis the general practitioner should be requested to examine the contacts, and be given the right to send the suspicious cases to a local consultative centre. Payment should be made to the practitioner for this extra work. Dr. Sutherland described the anti-tuberculosis dispensary, but seemed inclined to minimise the educative value of sanatoria. He placed the cost of a dispensary at £1500 per annum. Dr. Niven and Dr. Bibby followed with papers, and Miss Cowen described the excellent work done by the Jewish Board of Guardians. (3) Treatment was considered by Sir W. Osler, Dr. Latham, who drew attention to the false ideas prevalent among the public regarding the value of sanatoria, Dr. Jane Walker, who discussed sanatorium treatment, Drs. Paterson and Perkins, who considered their educative value, and other speakers. Miss McGaw drew attention to the value of tuberculosis schools and the desirability of their more universal adoption. (4) After-care of patients was dealt with by Mr. Loch and Dr. McConnel. (5) The administrative and financial aspects of the Insurance Bill; the cost to the community of tuberculosis; the use of existing accommodation. It would take too much space to consider all these papers, but mention may be made of a paper by Dr. Raw emphasising the use to which smallpox hospitals might be put as places of treatment of tuberculous patients, and one by Dr. Schuster on the National Insurance Bill and what it will do for the health of the nation. The book is well got up, and all the papers are worth reading and deserve the attention of every medical man. F. R. B. A.

HEALTH PAMPHLETS FROM THE ST. MARYLEBONE GENERAL DISPENSARY.

THE authorities of the above institution have issued seven handy leaflets on the following subjects: (1) Directions for the feeding of infants; (2) hints on the management of children from one to five years of age; (3) hints on the care of children of school age; (4) advice as to the care of the teeth; (5) fresh air and ventilation; (6) how to prevent or arrest consumption; (7) hints to patients suffering from indigestion.

Pamphlet No. 1, on infant feeding, is in the form of a catechism, and for the most part is expressed with admirable simplicity and clearness. It is to be feared, however, that not all parents will understand the words "dilute" and "undiluted," which constantly recur in this leaflet. Again, sufficient emphasis is not laid on cleaning the bottle, and explicit directions on this matter are not forthcoming.

Pamphlet No. 2 contains advice as to proper feeding, and also gives excellent advice on clothing, ventilation, and the common ailments of child life. A timely warning is issued against the bare legs and arms so common a feature among otherwise over-dressed juveniles.

No. 3 warns parents against chemists, opticians, and vermin. A short section is devoted to breathing exercises, and the need of eleven to thirteen hours' sleep. In the leaflet on the care of the teeth, very long and difficult

words are used, which no doubt are understood by the author, but would certainly not be by his patients.

The leaflets on fresh air and the prevention of consumption are excellent, but the best of the series is the leaflet on indigestion.

A useful weight chart for infants has also been drawn up. C. R.

PROCEEDINGS OF THE MANCHESTER CONFERENCE ON THE CARE OF THE FEEBLE-MINDED. Pp. 70. London and Manchester: Sherratt & Hughes. Price 6d.

These proceedings consists of papers by Dr. Tredgold and Miss Dendy, and the interesting discussion which ensued, and in which Drs. Lapage, Hutton, Melland, and Niven took part.

Dr. Tredgold stated that the number of defectives in the United Kingdom, *i. e.* those able to support themselves under favourable conditions, but unable to compete on equal terms with their normal fellows, reached the appalling figure of 150,000: 75,000 of these were wholly or partially supported by the State, and 66,000 needed permanent control owing to improper or unkind treatment.

The great disadvantage of leaving these persons at large consisted in the fact that the great majority of them were constantly committing trifling offences, that a few committed really serious crimes, and that women of this class were unable to protect their virtue, and were very fertile, producing twice as many children as their normal sisters.

Dr. Tredgold recommended that the children should be trained in special schools up to the age of sixteen, and after that age the county councils should be compelled to provide permanent homes for their life-long detention.

The predisposing cause of feeble-mindedness was discussed, and Dr. Tregold emphasised the fact that the condition was hereditary, but that the inheritance was not necessarily feeble-mindedness, but the neuropathic diathesis. Environment was of no importance. There were as many defective children in the country as in the slums, among the peers as among the proletariat.

Miss Dendy laid great stress on the dire effects of close inter-breeding, and mentioned Essex, Hampshire, the Isle of Wight, and the Scilly Isles, where repeated marriages in the same families resulted in an unusually large defective population.

Miss Dendy's paper contained a most interesting account of the splendid work done at Sandelbridge. Children were taken young and were first taught how to make a bed, how to fold their clothes, and how to keep themselves clean. Boys and girls were then taught sewing and knitting, and the more able received instruction in reading and writing. Many of these children were specialists. They could do one thing well. Some had fine memories, and these were made to remind other children of their duties at the proper time; others could darn beautifully and became the menders of the colony's socks. Some boys, who could do nothing, were at last found able to peel potatoes. Any little talent they might possess was thus devoted to the service of the community, with the result that the colony was partly self-supporting.

The boys became wonderfully skilful in farm and garden work. Five boys had became milkmen, and were fairly aseptic in their methods.

The opinion of other observers was that the defective at Sandelbridge were happier than normal children. Miss Dendy can want no higher praise.

C. R.